

## INDEX OF SUBJECTS

### Original articles

Absence of 1 umbilical artery, 247  
Adenohypophysis, changes in, associated with leprechaunism, 614  
Adenoma with parathyroid hyperplasia in a single gland, 51  
Albumin concentration effects on compatibility tests for blood transfusion, 348  
Alcoholics, chronic, urinary and serum zinc levels in, 156  
Antepartum culture findings of mothers, in relation to infantile diarrhea, 732  
Anti-D in a D-positive man, with positive direct Coombs test and normal red cell survival, 748  
Antigen-antibody reaction, technic which increases sensitivity of, 211  
Antigen in autoimmune hemolytic anemia, 75  
Anatomic pathology  
    arteries, luminal foam cells of atherosclerosis, 238  
    aspergillosis, 697  
    autopsy, fitting old-fashioned into modern medical scene, 202  
    blood vessels  
        film-dissolve demonstration, traced in serial sections, 620  
        polyarteritis nodosa presenting as acute cholecystitis, 468  
        primary dissecting aneurysm of renal artery, 472  
        thrombotic microangiopathy and malignant hypertension, 605  
    bone; central giant cell reparative granuloma of jaws, 437  
    bone marrow  
        carcinoma cells in aspirates, 722  
        primary systemic amyloidosis, 252  
        pseudogranulomatous mastocytic lymphadenitis, 180  
    brain  
        ethylene glycol toxicity, 46  
        ganglioglioma of brain stem, 692  
        meningitis caused by *Pasteurella ureae*, 562  
    cerebrospinal fluid; concentration of proteins, 643  
    gallbladder  
        cholecystitis and stenotic arteriosclerosis, 465  
        polyarteritis nodosa presenting as acute cholecystitis, 468  
    intestine  
        inflammatory fibroid polyps, 420  
        phycomycosis (mucormycosis), 264  
    joints; vacuoles in synovial fluid leukocytes, 728  
    kidney  
        ethylene glycol toxicity, 46  
        glomerular basement membrane in diabetics, 21  
        glomerular basement membranes, thickness of, 7  
        histologic alterations in renal homotransplants, 521  
        interstitial foam cells, 32  
        primary dissecting aneurysm of renal artery, 472  
    large intestine; colitis cystica profunda, 186  
    lung  
        anti- $\gamma$ -globulin and antinuclear factors in chronic bronchitis, 313  
        beryllium in pulmonary granulomas, 448  
        emphysema, diazo replication for pathologic study of, 1  
        *Pneumocystis carinii* pneumonia with multiple myeloma, 258  
        pulmonary alveolar proteinosis, 415  
    lymph node; pseudogranulomatous mastocytic lymphadenitis, 180  
    mandible; central giant cell reparative granuloma of jaws, 437  
    parathyroid; hyperplasia and adenoma in a single gland, 51  
    penis; Peyronie's disease, 670  
    pituitary; leprechaunism (Donohue's syndrome), 614  
    placenta; absence of 1 umbilical artery, 247  
    prostate; carcinoma of prostatic ducts (letter), 96  
    skeletal muscle  
        azure B bromide staining of, 42  
        serum creatine phosphokinase in 4 generations of muscular dystrophy family, 377  
    skin  
        elastofibroma, 679  
        morphology of sweat apparatus in cystic fibrosis, 455  
        pseudogranulomatous mastocytic lymphadenitis, 180  
    spleen; pseudogranulomatous mastocytic lymphadenitis, 180  
    stomach; gastric lymphosarcoma, 653  
    subcutaneous tissue; "pseudorheumatoid" subcutaneous nodules, 684  
    synovial fluid; vacuoles in leukocytes of, 728  
    thymus; erythropoiesis, 460  
    tissue; microbiology experience in collecting, 85  
    Aneurysm, primary dissecting, of renal artery, 472

## Antibiotics

- microtitrator system of serial dilution antibiotic sensitivity testing, 548
- susceptibility testing by standardized single disk method, 493

Anti- $\gamma$ -globulin and antinuclear factors in chronic bronchitis, 313

## Apparatus

- acetate plastic test tubes as cause of increased red cell and resin uptake of L-triiodothyronine, 139
- analysis of blood glucose using stable dry specimens, 297
- automated color film processing, 517
- automated method for determining serum and urine calcium, 358
- automatic simultaneous determination of total serum protein and serum albumin, 277
- collection box for specimens, 782
- device for viewing 35-mm. film-mounted specimens, 480
- device to facilitate preparation of AutoAnalyzer dialyzer membrane, 651
- disposable micropipet method for reticuloendothelial clearance studies in small animals, 93
- electronic particle counter as screening technic for cervical neoplasia, 172
- glass electrode determination of blood sodium and potassium, 283
- improved water-bath for coagulation tests, 110
- recording osmotic fragility of red cells on Spino Analytrol, 112
- semiautomatic marking device for microscope slides, 778
- storage humidity chamber for hemocytometers, 356
- transparent dialyzer bath for automated flow systems, 512
- ultramicro pH/Pco<sub>2</sub> electrode for 2-min. assay for pH and Pco<sub>2</sub>, 772

## Arteriosclerosis, stenotic, and cholecystitis, 465

## Aspergillosis, disseminated, 697

## Atherosclerosis, site of origin of luminal foam cells of, 238

## Atomic absorption spectroscopic determination of serum iron and iron-binding capacity, 533

## Autohemolysis for routine clinical use, 629

## Automated hematoxylin and eosin staining, 229

## Autopsy, fitting the old-fashioned, into modern medical scene, 202

## Azure B bromide staining of regenerating muscle, 42

## Bacteriology

- antepartum culture findings of mothers in relation to infantile diarrhea, 732
- antibiotic susceptibility testing by a standardized single disk method, 493

## Circulating antibody responses to mycobacterial stimuli, 552

## Diagnosis of enterobacteriaceae in the hospital laboratory, 497

## Differentiation of pathogenic pseudomonads by heat resistance of alkaline phosphatase, 639

## Evaluation of some disinfectants, 412

Hemolysis by urinary *Escherichia coli*, 222Identification of enteropathogenic *Escherichia coli* in pregnant women, with cultural and fluorescent antibody technic, 125

## Immunologic studies of tuberculoprotein-C with human serums by Parlett gel-diffusion technic, 764

## Impregnated disk method for preparing tuberculosis susceptibility testing mediums, 769

Meningitis caused by *Pasteurella ureae*, 562

## Microbiology experience in collection of human tissue, 85

## Microtitrator system of serial dilution antibiotic sensitivity testing, 548

## New culture medium for medical bacteriology, 502

## Perineal prep with pHisoHex, a source of error in urinalysis, 225

## Selective screening for quantitative urine cultures, 649

## Sputum digestion; mortality rate of tubercle bacilli in various digestion systems, 352

## Variable results from triple sugar iron agar in screw-capped tubes, 218

## Beryllium in pulmonary granulomas, demonstration of, 448

## Bilirubin screening test, 510

## Blood

Accuracy of venous and capillary blood for the prediction of arterial pH, Pco<sub>2</sub>, and Po<sub>2</sub> measurements, 129

## Analysis of blood glucose using stable dry specimens, 297

## Antigen in autoimmune hemolytic anemia, 75

## Autohemolysis for routine clinical use, 629

Hematocrit values in evaluation of red cell survival with Cr<sup>51</sup>, 56

## Increased red cell and resin uptake of L-triiodothyronine caused by use of acetate plastic test tubes, 139

## Light and electron microscopic localization of acid phosphatase activity in human eosinophils, 402

## New thymol turbidity standard, 166

## Orthocresolphthalein complexone determination of serum calcium, 290

## Recording osmotic fragility of red cells on the Spino Analytrol, 112

## Refractory normoblastic ("sideroblastic") anemia, 581

relation of viscosity of plasma and whole blood, 273  
simple mail-in method for chromosome analysis, 153  
urinary and serum zinc levels in chronic alcoholics, 156, 160  
Blood banking  
anti-D in a D-positive man, with positive direct Coombs test and normal red cell survival, 748  
antigen in autoimmune hemolytic anemia, 75  
effects of albumin concentration on compatibility tests for blood transfusion, 348  
increasing sensitivity of antigen-antibody reaction, 211  
long-term effects of repeated plasmapheresis, 367  
preparation of plasma factor VIII (antihemophilic globulin) concentrate, 373  
Blood coagulation  
abnormal platelet function in myelofibrosis, 566  
evaluation of fibrinolysis in hepatic cirrhosis, 61  
improved water-bath for coagulation tests, 110  
prothrombin consumption time test, 105  
relation of viscosity of plasma and whole blood, 273  
statistical quality control of rabbit brain thromboplastin for clinical use in prothrombin time determination, 148  
Blood vessels, film-dissolve demonstration of, traced in serial sections, 620  
Bone marrow aspirates, carcinoma cells in, 722  
Bone marrow aspiration in antemortem diagnosis of primary systemic amyloidosis, 252  
Brain stem, ganglioglioma of, 692  
Bronchitis, anti- $\gamma$ -globulin and antinuclear factors in chronic, 313

Cancer  
carcinoma cells in bone marrow aspirates, 722  
carcinoma of prostatic ducts (letter), 96  
cervical neoplasia, electronic particle counter as screening technic for, 172  
immunofluorescent tumor imprint technic, 714  
Cellular localization of immune globulin synthesis, 574  
Cellulose acetate, electrophoretic precipitin test on, 323  
Central giant cell reparative granuloma of the jaws, 437  
Cerebrospinal fluid proteins, concentration of, prior to paper electrophoresis, 643  
Cervical neoplasia, electronic particle counter as screening technic for, 172  
Chemistry  
accuracy of venous and capillary blood for prediction of arterial pH,  $\text{PCO}_2$ , and  $\text{PO}_2$  measurements, 129  
analysis of blood glucose, using stable dry specimens, 297  
analysis of 17-hydroxy-corticoids in urine and blood by gas-liquid chromatography, 142  
application of rapid cephalin-cholesterol flocculation test in liver profile studies, 746  
atomic absorption spectroscopic determination of serum iron and iron-binding capacity, 533  
AutoAnalyzer for measuring  $\text{CO}_2$  content, 406  
autohemolysis for routine clinical use, 629  
automated determination of uric acid by hydroxylamine method, 339  
automated procedure for total organic iodine, 344  
automatic simultaneous determination of total serum protein and serum albumin, 277  
beryllium in pulmonary granulomas, 448  
clinical application and interpretation of serum lactic dehydrogenase zymogram, 737  
colorimetric (tetrazolium salt) assay for lactate dehydrogenase, 544  
determination of total bile pigments in jaundiced serum, 70  
disposable micropipet method for performing reticuloendothelial clearance studies in small animals, 93  
evaluation of bilirubin screening test, 510  
glass electrode determination of blood sodium and potassium, 283  
increased red cell and resin uptake of L-triiodothyronine caused by use of acetate plastic test tubes, 139  
kinetic determination of serum  $\alpha$ -hydroxybutyrate dehydrogenase, 760  
macroglobulins and the Sia water test, 306  
micro-methemoglobin reduction test for glucose 6-phosphate dehydrogenase deficiency, 82  
orthocresolphthalein complexone determination of serum calcium, 290  
new thymol turbidity standard, 166  
screening for elevated serum phenylalanine levels with chromatography, 647  
serum creatine phosphokinase in 4 generations of muscular dystrophy family, 377  
serum haptoglobin, automated method applied to patient screening, 634  
serum immunoglobulin levels in sarcoidosis, 398  
simplified manual plasma glucose method, 775  
sucrose gradient electrophoresis; studies of the serum proteins, 381  
two-minute assay for pH and  $\text{PCO}_2$  utilizing an ultramicro pH/ $\text{PCO}_2$  electrode, 772  
urinary and serum zinc levels in chronic alcoholics, 156, 160  
urinary  $\gamma$ -globulin excretion in systemic lupus erythematosus, 541

Cholecystitis, acute, polyarteritis nodosa presenting as, 469

Cholecystitis and stenotic arteriosclerosis, 465

Chromatography  
analysis of 17-hydroxy-corticoids in urine and blood by gas-liquid chromatography, 142  
anti- $\gamma$ -globulin and antinuclear factors in chronic bronchitis; relation of disease course and hyperglobulinemia, 313  
screening for elevated serum phenylalanine levels by chromatography, 647

Chromium-51 evaluation of hematocrit values in evaluation of red cell survival, 56

Chromosome analysis, simple mail-in method for, 153

Circulating antibody responses to mycobacterial stimuli, 552

Coagulation tests, improved water-bath for, 110

CO<sub>2</sub> content, measurement with AutoAnalyzer, 406

Colitis cystica profunda, 186

Collection box for specimens, 782

Control subjects, modified zinc analysis method and serum and urinary zinc levels in, 160

Corrections, 328, 484, 623, 751

Cystic fibrosis, morphology of sweat apparatus in, 455

Cytogenetics, simple mail-in method for chromosome analysis, 153

Cytology  
electronic particle counter as screening technic for cervical neoplasia, 172  
pulmonary alveolar proteinosis, 415

Data processing, use of formalin-preserved erythrocytes in quality control, 122

Diabetics, glomerular basement membrane in, 21

Dialyzer bath, transparent, for automated flow systems, 512

Diazo replication for pathologic study of emphysema, 1

Dimethyl sulfoxide method of permanent staining of intestinal parasites, 363

Disinfectants, evaluation of, 412

Disseminated aspergillosis, 697

Disseminated lymphosarcoma, relation to gastric lymphosarcoma, 653

Elastofibroma, 679

Electronic particle counter as screening technic for cervical neoplasia, 172

Electron microscopy  
combined with light microscopic examination of surgical specimens, 704

glomerular basement membrane in diabetics, 21

localization of acid phosphatase activity in human eosinophils, 402

refractory normoblastic ("sideroblastic") anemia, 581

renal interstitial foam cells, 32

thickness of glomerular basement membrane, 7

Electrophoresis  
concentration of cerebrospinal fluid proteins prior to paper electrophoresis, 643  
electrophoretic precipitin test on cellulose acetate, 323  
gel reactions in serums containing immunoglobulin abnormalities, 505  
macroglobulins and the Sia water test, 306  
studies of the serum proteins; sucrose gradient electrophoresis, 381

Emphysema, diazo replication for pathologic study of, 1

Endocrinology  
analysis of 17-hydroxy-corticoids in urine and blood by gas-liquid chromatography, 142  
increased red cell and resin uptake of L-triiodothyronine caused by use of acetate plastic test tubes, 139

leprechaunism (Donohue's Syndrome), with emphasis on changes in adenohypophysis, 614

primary hyperparathyroidism with parathyroid hyperplasia and adenoma in a single gland, 51

Enterobacteriaceae, diagnosis of, in hospital laboratory, 497

Enzymology  
clinical application and interpretation of serum lactate dehydrogenase zymogram, 737  
colorimetric (tetrazolium salt) assay for lactate dehydrogenase, 544  
kinetic method for determination of serum  $\alpha$ -hydroxybutyrate dehydrogenase, 760  
lactate dehydrogenase in megaloblastic bone marrow, 302  
light and electron microscopic localization of acid phosphatase activity in human eosinophils, 402  
micro-methemoglobin reduction test for glucose 6-phosphate dehydrogenase deficiency, 82  
serum creatine phosphokinase in 4 generations of a muscular dystrophy family, 377

Erythropoiesis in the human thymus, 460

Ethylene glycol toxicity, 46

Fibrinolysis evaluation in hepatic cirrhosis, 61

Film-dissolve technic for demonstrating blood vessels, traced in serial sections, 620

Film-mounted specimens, device for viewing 35 mm., 480

Fluorescent antibody technics  
diagnosis of lupus erythematosus, using stored tissue culture cells, 117

identification of enteropathogenies *Escherichia coli* in pregnant women, 125  
immunofluorescent tumor imprint technic, 714  
Forensic science  
ethylene glycol toxicity, 46  
failure of methylene blue to produce methemoglobinemia *in vivo*, 600  
Formalin-preserved erythrocytes, use of, in quality control, 122

Ganglioglioma of the brain stem, 692  
Gas-liquid chromatographic analysis of 17-hydroxy-corticoids in urine and blood, 142  
Gastric lymphosarcoma, relation to disseminated lymphosarcoma, 653  
Gastrointestinal tract, inflammatory fibroid polyps of, 240  
Gel media, improved immunodiffusion template for, 507  
Genetics  
micro-methemoglobin reduction test for glucose 6-phosphate dehydrogenase deficiency, 82  
serum creatine phosphokinase in 4 generations of a muscular dystrophy family, 377  
simple mail-in method for chromosome analysis, 153  
Glass electrode determination of blood sodium and potassium, 283  
Glomerular basement membrane in diabetics, 21  
Glomerular basement membranes, thickness of, 7  
Granuloma of the jaws, central giant cell reparative, 437

Hematology  
abnormal platelet function in myelofibrosis, 566  
bone marrow aspiration in antemortem diagnosis of primary systemic amyloidosis, 252  
carcinoma cells in bone marrow aspirates, 722  
cellular localization of immune globulin synthesis in infectious mononucleosis, 574  
evaluation of fibrinolysis in hepatic cirrhosis; relation of serial thrombin time and euglobulin lysis time, 61  
fluorescent antibody technic as routine procedure in diagnosis of lupus erythematosus, using stored tissue culture cells, 117  
formalin-preserved erythrocytes in quality control, 122  
gastric lymphosarcoma; its relation to disseminated lymphosarcoma, 653  
hematocrit values in evaluation of red cell survival with chromium-51, 56  
lactate dehydrogenase in megaloblastic bone marrow, 302  
light and electron microscopic localization of acid phosphatase activity in human eosinophils, 402

method for preparing plasma factor VIII (anti-hemophilic globulin) concentrate, 373  
microtechnic applied to heterophile antibody test for detection of infectious mononucleosis, 755  
*Pneumocystis carinii* pneumonia in 2 adults with multiple myeloma, 258  
prothrombin consumption time test, 105  
recording osmotic fragility of red cells on the Spino Analytrol, 112  
refractory normoblastic ("sideroblastic") anemia, 581  
statistical quality control of rabbit brain thromboplastin for clinical use in the prothrombin time determinations, 148  
storage humidity chamber for hemocytometers, 356  
Hepatic cirrhosis, evaluation of fibrinolysis in; relation of serial thrombin time and euglobulin lysis time, 61  
Histologic alterations in human renal homotransplants, 521  
Histologic technic  
azure B bromide staining of regenerating muscle, 42  
combined light and electron microscopic examination of surgical specimens, 704  
diazotization for pathologic study of emphysema, 1  
film-dissolve technic for demonstration of blood vessels, traced in serial sections, 620  
preparation of specimens of whole-mounted helminths for microscopic study, 515  
program for automated hematoxylin and eosin staining, 229  
removing tissue blocks from a frozen section, 624  
simple method of permanent staining of intestinal parasites, using dimethyl sulfoxide, 363  
simple, rapid, precise stain for intestinal protozoa, 361  
thrombotic microangiopathy and malignant hypertension, 605  
Homotransplants, serial histologic alterations in human renal, 521  
Hydroxylamine method of automated determination of uric acid, 339  
Hyperparathyroidism, primary, with parathyroid hyperplasia and adenoma in a single gland, 51

Immunohematology  
anti-D in a D-positive man, with positive direct Coombs test and normal red cell survival, 748  
antigen in autoimmune hemolytic anemia, 75  
cellular localization of immune globulin synthesis in infectious mononucleosis, 574

effects of albumin concentration on compatibility tests for blood transfusion, 348

increase in sensitivity of the antigen-antibody reaction, 211

microtechnic applied to heterophile antibody test for detection of infectious mononucleosis, 755

**Immunology**

- anti- $\gamma$ -globulin and antinuclear factors in chronic bronchitis, 313
- circulating antibody responses to mycobacterial stimuli, 552
- electrophoretic precipitin test on cellulose acetate, 323
- gel reactions in serums containing immunoglobulin abnormalities, 505
- improved immunodiffusion template for gel media, 507
- serial histologic alterations in human renal homotransplants, 521
- serum immunoglobulin levels in sarcoidosis, 398

Impregnated disks for preparation of tuberculosis susceptibility testing medium, 769

Infantile diarrhea, antepartum culture findings of mothers in relation to, 732

Infectious mononucleosis, cellular localization of immune globulin synthesis, 574

Infectious mononucleosis, microtechnic applied to heterophile antibody test for detection of, 755

Inflammatory fibroid polyps of gastrointestinal tract, 420

Interstitial foam cells, renal, 32

Intestinal phyeomycosis (mucormycosis), 264

Intestinal protozoa, simple, rapid, precise stain for, 361

Jaws, central giant cell reparative granuloma of, 437

Lactate dehydrogenase in megaloblastic bone marrow, 302

Lactate dehydrogenase, colorimetric (tetrazolium salt) assay for, 544

Leprechaunism (Donohue's syndrome), with changes in the adenohypophysis, 614

Letters to the Editor, 96, 208, 209, 329, 330, 624, 751

Liver profile studies, application of rapid cephalin-cholesterol flocculation test in, 746

Luminal foam cells of atherosclerosis, site of origin of, 238

Lupus erythematosus, fluorescent antibody technique as routine procedure in diagnosis of, using stored tissue culture cells, 117

Lymphadenitis, pseudogranulomatous mastocytic, 180

Macroglobulins and the Sia water test, 306

Magnesium, effect of, on determination of serum and urine calcium, 358

Malignant hypertension and thrombotic microangiopathy, 605

Marking device for microscope slides, semiautomatic, 778

Megaloblastic bone marrow, lactate dehydrogenase in, 302

Meningitis caused by *Pasteurella ureae*, 562

Methemoglobinemia *in vivo*, failure of methylene blue to produce, 600

Microbiology experience in collection of human tissue, 85

Micro-methemoglobin reduction test for glucose 6-phosphate dehydrogenase deficiency, 82

Micropipet, disposable, method for performing reticuloendothelial clearance studies in small animals, 93

Microtitrator system of serial dilution antibiotic sensitivity testing, 548

Multiple myeloma, *Pneumocystis carinii* pneumonia in 2 adults with, 258

Muscular dystrophy family, serum creatine phosphokinase in 4 generations of a, 377

Mycobacterial stimuli, circulating antibody responses to, 552

**Mycology**

- disseminated aspergillosis, 697
- intestinal phyeomycosis (mucormycosis), 264

Myelofibrosis, abnormal platelet function in, 566

Orthocresolphthalein complexone determination of serum calcium, 290

Osmotic fragility of red cells, recording of, on Spino Analytrol, 112

**Parasitology**

- Pneumocystis carinii* pneumonia in 2 adults with multiple myeloma, 258
- simple method of permanent staining of intestinal parasites, using dimethyl sulfoxide, 363
- simple, rapid, precise stain for intestinal protozoa, 361
- technic for preparation of specimens of whole-mounted helminths for microscopic study, 515

Parathyroid hyperplasia and adenoma in a single gland, 51

Parlett gel-diffusion technic for immunologic studies of tuberculoprotein-C with human serums, 764

*Pasteurella ureae* as cause of meningitis, 562

Pathogenic pseudomonads, differentiation of, by heat resistance of alkaline phosphatase, 639

Perineal prep with pHisoHex, source of error in urinalysis, 225

Peyronie's disease, 670

Phycomycosis, intestinal (mucormycosis), 264

Plasma  
long-term effects of repeated plasmapheresis, 367  
method for preparing plasma factor VIII (anti-hemophilic globulin) concentrate, 373  
relation of the viscosity of plasma and whole blood, 273  
simplified manual plasma glucose method (in conjunction with automated analysis), 775

Polyarteritis nodosa presenting as acute chole-cystitis, 468

Polyps, inflammatory, fibroid, of the gastrointestinal tract, 420

Potassium, glass electrode determination of blood sodium and, 283

Presidential address: pathology's obligation and responsibilities in meeting the challenges of modern medical practice, 231

Primary systemic amyloidosis, bone marrow aspiration in antemortem diagnosis of, 252

Primate and non-primate erythrocytes, reactivity of human autoantibodies and rhesus antibodies with, 75

Procedures  
antibiotic susceptibility testing by a standardized single disk method, 493  
automated color film processing in the pathology laboratory, 517  
automated determination of uric acid by hydroxylamine method, 339  
automated procedure for total organic iodine, 344  
immunofluorescent tumor imprint technic, 714  
immunologic studies of tuberculoprotein-C with human serums by Parlett gel-diffusion technic, 764  
kinetic method for determination of serum  $\alpha$ -hydroxybutyrate dehydrogenase, 760  
method for concentration of cerebrospinal fluid proteins prior to paper electrophoresis, 643  
micro-methemoglobin reduction test for glucose 6-phosphate dehydrogenase deficiency, 82  
preparation of tuberculosis susceptibility testing mediums with impregnated disks, 769  
screening for elevated serum phenylalanine levels with simple and practical chromatographic method, 647  
selective screening for quantitative urine cultures, 649  
serum haptoglobin; automated method applied to patient screening, 634  
simple means for removing tissue blocks from a frozen section, 624  
simplified determination of total bile pigments in jaundiced serum, 70  
simplified manual plasma glucose method (in conjunction with automated analysis), 775  
technic for preparation of specimens of whole-mounted helminths for microscopic study, 515  
technic which increases the sensitivity of the antigen-antibody reaction, 211  
two-minute assay technic for pH and  $P_{CO_2}$  utilizing an ultramicro pH/ $P_{CO_2}$  electrode, 772

Prothrombin consumption time test, 105

Pseudogranulomatous mastocytic lymphadenitis, 180

"Pseudorheumatoid" subcutaneous nodules, 684

Pulmonary alveolar proteinosis, 415

Pulmonary granulomas, demonstration of presence of beryllium in, 448

Radioisotopes  
disposable micropipet method for performing reticuloendothelial clearance studies in small animals, 93  
increased red cell and resin uptake of L-triiodothyronine caused by use of acetate plastic test tubes, 139  
use of hematocrit values in evaluation of red cell survival with chromium-51, 56

Refractory normoblastic ("sideroblastic") anemia, 581

Regenerating muscle, azure B bromide staining of, 42

Renal artery, primary dissecting aneurysm of, 472

Renal interstitial foam cells, 32

Sarcoidosis, serum immunoglobulin levels in, 398

Serums  
analysis of 17-hydroxy-corticoids in urine and blood by gas-liquid chromatography, 142  
automatic simultaneous determination of total serum protein and serum albumin, 277  
clinical application and interpretation of the serum lactic dehydrogenase zymogram, 737  
determination of serum calcium by means of orthocresolphthalein complexone, 290  
determination of serum iron and iron-binding capacity by atomic absorption spectroscopy 533  
evaluation of a bilirubin screening test, 510  
gel reactions in serums containing immunoglobulin abnormalities, 505  
macroglobulins and the Sia water test, 306  
observations on automated method for determination of serum and urine calcium and the effect of magnesium, 358  
rapid kinetic method for determination of serum  $\alpha$ -hydroxybutyrate dehydrogenase, 760  
screening for elevated serum phenylalanine levels with simple and practical chromatographic method, 647

serum haptoglobin; automated method applied to patient screening, 634

serum immunoglobulin levels in sarcoidosis, 398

serum zinc levels in chronic alcoholics, 156, 160

simplified procedure for determination of total bile pigments in jaundiced serum, 70

studies of serum proteins; sucrose gradient electrophoresis, 381

"Sideroblastic" anemia, 581

Sputum digestion; mortality rate of tubercle bacilli in various digestion systems, 352

Stenotic arteriosclerosis and cholecystitis, 465

Storage humidity chamber for hemocytometers, 356

Sweat apparatus, morphology of, in cystic fibrosis, 455

Synovial fluid leukocytes, vacuoles in, 728

Systemic lupus erythematosus, urinary  $\gamma$ -globulin excretion in, 541

Tests

- evaluation of a bilirubin screening test, 510
- prothrombin consumption time test, 105

Thickness of glomerular basement membranes, 7

Thrombotic microangiopathy and malignant hypertension, 605

Thymol turbidity standard, new, 166

Thymus, erythropoiesis in the human, 460

Tissue culture, fluorescent antibody technic as routine procedure in diagnosis of lupus erythematosus using stored tissue culture cells, 117

Total bile pigments in jaundiced serum, simplified determination of, 70

Total organic iodine, automated procedure for, 344

Toxicology

- ethylene glycol toxicity, 46
- failure of methylene blue to produce methemoglobinemia *in vivo*, 600

Tubercle bacilli, mortality rate of, in various digestion systems, 352

Tuberculosis susceptibility testing mediums, preparation of, with impregnated disks, 769

Umbilical artery, absence of one, 247

Urine

- analysis of 17-hydroxy-corticoids in urine and blood by gas-liquid chromatography, 142
- automated method for determination of serum and urine calcium, 358
- hemolysis by urinary *Escherichia coli*, 222
- perineal prep with pHisoHex, source of error in urinalysis, 225
- selective screening for quantitative urine cultures, 649
- urinary and serum zinc levels in chronic alcoholics, 156, 160
- urinary  $\gamma$ -globulin excretion in systemic lupus erythematosus, 541
- variable results from triple sugar iron agar in screw-capped tubes, 218

Vacuoles in synovial fluid leukocytes, 728

Viscosity of plasma and whole blood, relation of, 273

Water-bath, improved, for coagulation tests, 110

Whole-mounted helminths, technic for preparing specimens of, for microscopic study, 515

**In Memoriam**

- Catron, Lloyd F., 210
- Chow, Charles C. T., 98
- Craig, Helen F., 625
- McManus, Richard G., 752
- Moore, Franklin Johnson, 627
- Moore, Robert M., 483
- Prieto, Helen Rhodes, 753
- Sher, Ben C., 626
- Trinidad, Salvador S., 625

**News and Notices**, 331, 365, 484, 623, 736

**Organization Section**, 332-337

**Book reviews**, 99-104, 230, 338, 366, 485-492, 520, 628, 754

## INDEX OF AUTHORS

Ablow, Ronald C., 186  
Aburano, Akio, 605  
Albert, S., 460  
Alcocer, Arthur E., 156, 160  
Alger, Nelda, 361  
Allen, Turman E., 112  
Allin, R. C., 398  
Alstott, David F., 420  
Anderson-Langmuir, Cheryl, 218  
Angrist, Alfred, 202  
Annino, Joseph S., 512  
Arvan, Dean A., 358  
Ascari, William Q., 186  
Austin, Elizabeth, 344  
  
Balchum, Oscar J., 129  
Bareelo, Raymond, 541  
Barnett, Roy N. (letters), 209, 329  
Barr, J. Robin, 679  
Bartman, Jacqueline, 455  
Bartone, John C., 415  
Bates, Hampton R., Jr. (letter), 96  
Batsakis, John G., 544  
Batshon, B. A., 125  
Bauer, A. W., 493  
Bauer, Heinz, 728  
Benedict, William H., 760  
Benson, Peter A., 760  
Beres, Joseph, 21  
Berry, Roland E. (letter), 330  
Birdwell, T. R., 153  
Blatt, W. F., 356  
Bonomo, L., 313  
Bove, Kevin E., 46  
Brewer, George J., 82  
Briere, Russell O., 544  
Briggs, Anglis R., 290  
Brodsky, Isadore, 61  
Brody, Gerald L., 684  
Brokeshoulder, Solomon F., 448  
Bunting, Dorothy, 566  
Burke, Roger A., 56  
Burnham, Thomas K., 714  
Burrows, Stanley, 634  
Byers, Sanford O., 238  
  
Calle, Simon, 264  
Callerame, Mary Lou, 258  
Cantow, Edward F., 629  
Capacho-Delgado, Luis, 533  
Carpenter, R. L., 398  
Carter, R. L., 574  
Cawley, Leo P., 737  
Ceremsak, Robert J., 225  
  
Cheatle, Esther L., 412  
Chen, Yu Yin, 782  
Chu, Y. M., 552  
Cipparone, Joseph R., 247  
Comfort, D. J., 505  
Comstock, Betsy S., 297  
Comstock, Eric G., 297  
Connerty, Harold V., 290  
Controni, Guido, 782  
Crist, E. Richard, 110  
Cuklanz, Elaine, 139  
Cunningham, D. L., 692  
Czernowicz, T. J., 764  
  
Davis, David K., 775  
Dennis, Lewis H., 61  
De Vogel, W., 620  
Didisheim, Paul, 566  
Dimmette, R. M., 153  
Dineen, James J., Jr., 93  
Douglas, G. W., 497  
Drakeford, Elaine, 502  
  
Eberhardt, Lucile, 737  
Eggen, R. R., 153  
Ellner, Paul D., 502  
Emerson, J. S., 649  
Englund, Garth W., 472  
Epstein, Stefan Ellis, 186  
Erickson, Cyrus C., 692  
Evans, Paul V., 722  
  
Ferro, Patrick V., 166  
Fine, Gerald, 714  
Fink, Diane J., 581  
Finch, Stuart C., 93  
Fisher, Lyman M., 148  
Frawley, Thomas F., 142  
Friedman, Meyer, 238  
Fuste, F. G., 692  
  
Gambino, S. Raymond, 406, 772  
Gayton, J., 748  
Ghidoni, John J., 402  
Gilliardi, U., 313  
Gnabasik, Francis J., 93  
Goldberg, Arthur F., 402  
Goodman, Joseph R., 581  
Gray, J. L., 356  
Groch, George S., 93  
Gurdjian, E. S., 283  
  
Haiby, Gabriel, 562  
Hall, Leo, 755

Hall, Shirley G., 581  
 Ham, Anna Bell, 166  
 Hammond, D. F., 117  
 Harris, James C., 51  
 Hart, Claudia, 510  
 Heller, Paul, 302  
 Helwig, Harold L., 156, 160  
 Hidalgo, John U., 56  
 Hoffer, Emanuel M., 156, 160  
 Hoffmann, Robert G. (letter), 208  
 Hossaini, Ali A., 348  
 Hosten, Edward B., 634  
 Hotelling, David R., 156, 160  
 Houston, Clemith J., 515  
 Howell, Herman O., 122  
 Humphries, Betty Lou, 148  
 Hutson, Oliver D., 480

Jenkins, Dorothy, 139  
 Jennings, Robert B., 600  
 Johnson, Marvin W., 381  
 Joseph, Julian I., 653  
 Jung, Ralph C., 129

Kelly, Sally, 377  
 Kelly, William D., 377  
 Kimmelstiel, Paul, 7, 21  
 Kirby, W. M. M., 493  
 Klatsky, Stanley, 264  
 Knutsen, Conrad A., 82  
 Koepke, John A., 344  
 Kostinas, John E., 629  
 Krasnow, Irving, 352, 769  
 Kurlander, Gerald J., 420  
 Kyle, Robert A., 252

Landing, Benjamin H., 455  
 Lattes, Raffaele, 186, 653  
 Leitner, M. J. (letter), 624  
 Lemmi, Helio, 643  
 Lench, Joel, 156  
 Levine, Paul H., 85  
 Libnoch, Joseph A., 302  
 Liebman, Michael, 415  
 Lien, Donna M., 367, 373  
 Littler, Ellsworth R., Jr., 180  
 Liu, Pinghui V., 639  
 Longnecker, Daniel S., 229  
 Luna, Lee G., 480  
 Lusted, Dean, 778  
 Lynn, Joseph A., 704

MacNair, Donald S., 517  
 Macpherson, C. R., 748  
 Malinin, Theodore I., 728  
 Martin, James H., 704  
 Marymont, Jesse H., Jr., 548  
 Massey, Frank J., 129

Mayer, George A., 273  
 McCully, Robert M., 480  
 McGeachie, James, 222  
 McIntosh, Duncan A., 521  
 McPhaul, John J., Jr., 521  
 McVean, Duncan E., 448  
 Mendelow, Harvey, 468  
 Merdinger, Walter F., 465  
 Mesara, Bruce W., 684  
 Milam, John D., 56  
 Milner, L. V., 211  
 Minekler, Tate M., 85  
 Mitchell, Hugh L., 363  
 Miyasato, F., 541  
 More, Brian M., 465  
 Mortensen, Norval, 122  
 Muehreke, Robert C., 32  
 Muirhead, E. E., 323  
 Muna, N. M., 117  
 Musser, A. Wendell, 339

Nadel, Martin, 258  
 Neblett, Thomas R., 714  
 Newell, Guy R., 85  
 Niwayama, Gen, 85

Oberman, 367, 373, 684  
 O'Connor, C., 497  
 Oliner, Leo, 51  
 Ortigosa, Corpus, 339  
 Osawa, Gengo, 7, 21  
 O'Toole, William F., 85

Page, Lillian M., 764  
 Pardo, Victoriani, 605  
 Parlett, R. C., 552  
 Patnode, R. A., 398  
 Patti, A. Anne, 142  
 Pearson, Carl M., 42  
 Pease, Gertrude L., 252  
 Pekin, Thomas J., Jr., 728  
 Penistan, J. L. (letter), 751  
 Penner, John A., 373  
 Peterson, Emil W., 521  
 Petz, Lawrence D., 581  
 Pirani, Conrad L., 32  
 Pirofsky, Bernard, 75  
 Plaut, David, 510  
 Pollak, Victor E., 541  
 Portnoy, H. D., 283  
 Pratt, Katherine, 75  
 Preston, Joseph A., 544  
 Prichard, Robert W. (letter), 751  
 Prine, James R., 448  
 Pryjma, I., 460

Quick, Armand J., 105

Race, George J., 704  
Ramirez-Rivera, Jose, 415  
Ratliff, C. Ray, 746  
Reinisch, Edith, 755  
Rice, John D., Jr., 277  
Richart, Ralph M., 172  
Richmond, J. G., 692  
Richmond, Helen, 252  
Robinson, F. R., 448  
Rogers, Donald R., 614  
Rogers, William H., 156, 160  
Rosen, Seymour, 32  
Rosenbaum, David, 51  
Rosner, Richard, 732  
Russell, William O., 231

Samter, Thomas G., 420  
Samuels, Monroe S., 56  
Sanderson, Dewey, 225  
Saravis, Calvin A., 507  
Schneider, H., 323  
Schreiber, Harry, 406, 772  
Schwartz, Ira S., 468  
Seal, Ulysses S., 306  
Seaman, William B., 186  
Segal, H. A., 356  
Seiling, Virginia, 7  
Shafer, William G., 437  
Sherris, J. C., 493  
Sherwin, Russell P., 1  
Shields, Charles E., 112  
Simson, Laurence R., 367, 373  
Singer, Karel, 647  
Smith, Bruce H., 480, 670  
Smith, Harriet H., 218  
Snyder, Roy W., 412  
Sohn, David, 624  
Sommers, Sheldon C., 465  
Stein, Arthur A., 142  
Stellmacher, Virginia, 139  
Stevenson, T. D., 748  
St. George, Shirley, 238  
Stoessel, Carole Jean, 502  
Stonier, Peter F., 722  
Stossel, Thomas P., 600

Sugai, Kenji, 697  
Sullivan, Louise, 252  
Sunderman, F. William, Jr., 381  
Swift, Herbert L., 377  
Sylvia, Lawrence C., 533

Tan, Kheng Khoo, 697  
Tan, Kim Leong, 697  
Tauze, W. Newlon, 139  
Thrasher, G. Stephen, 746  
Thielen, William C., 156, 160  
Thornton, John L. (letter), 96  
Turek, M., 493  
Tursi, A., 313

Vaillant, Henry W., 172  
Van Der Grond, C. J., 620  
Vasi, Frank, 502  
Vazquez, J., 460  
Verner, J. L., 117

Wagenvoort, C. A., 620  
Waid, Margaret E. (letter), 208  
Waldron, Charles A., 437  
Wang, Wen Lan Lou, 562  
Warner, Carol L., 367, 373  
Wayne, Lawrence G., 352, 769  
Weiser, O. L., 649  
Wentz, Robert M., 548  
Wetzel, Richard A., 629  
Whitaker, John N., 643  
Winkler, Lester, 468  
Wolf, Paul L., 460  
Wood, Fae D., 42  
Wright, Earl J., 737

Yakulis, Vincent J., 302  
Young, V. M., 497

Zajac, John S., 651  
Zaroda, Ray A., 70  
Zettner, Alfred, 533  
Zinneman, Horace H., 306  
Zvaipler, Nathan J., 728  
Zydeck, F. A., 323



# American Journal of Clinical Pathology

OFFICIAL PUBLICATION OF THE  
AMERICAN SOCIETY OF CLINICAL PATHOLOGISTS

## *Board of Editors*

LESTER ADELSON	S. E. GOULD	J. W. REAGAN
R. D. BAKER	E. B. HELWIG	JOHN REBUCK
P. R. BEAMER	J. B. HENRY	S. BRANDT ROSE
G. R. BISKIND	D. L. HINERMAN	ROBERT SCHREK
G. P. BLUNDELL	J. W. KERNOHAN	D. A. SENHAUSER
W. M. CHRISTOPHERSON	RAFFAELE LATTES	JOHN SHIVELY
BRADLEY COPELAND	H. H. LEFFLER	D. E. SMITH
REX COUCH	H. J. LINN	KURT STERN
C. G. CULBERTSON	J. R. McDONALD	G. G. STILWELL
ISRAEL DAVIDSOHN	P. J. MELNICK	F. W. SUNDERMAN
L. W. DIGGS	E. E. MUIRHEAD	V. N. TOMPKINS
E. R. FISHER	C. A. OWEN, JR.	L. A. WEED
	E. R. POWSNER	R. E. ZIPF

---

FRANK VELLIOS, *Editor-in-Chief*  
ISABELLA ROWLISON, *Assistant to the Editor*  
Indiana University Medical Center  
Indianapolis, Indiana 46207

Volume 45, Numbers 1-6

JANUARY-JUNE

Baltimore  
The Williams & Wilkins Company  
1966

COPYRIGHT ©, 1966 BY THE WILLIAMS & WILKINS COMPANY

TABLE OF CONTENTS  
JANUARY TO JUNE, 1966

Number 1, January 1966

Diazo Replication for the Pathologic Study of Emphysema. RUSSELL P. SHERWIN.....	1
Thickness of Glomerular Basement Membranes. GENGO OSAWA, PAUL KIMMELSTIEL, AND VIRGINIA SEILING.....	7
Glomerular Basement Membrane in Diabetes. PAUL KIMMELSTIEL, GENGO OSAWA, AND JOSEPH BERES.....	21
Renal Interstitial Foam Cells. A Light and Electron Microscopic Study. SEYMOUR ROSEN, CONRAD L. PIRANI, AND ROBERT C. MUEHRCKE.....	32
Azure B Bromide Staining of Regenerating Muscle. FAE D. WOOD AND CARL M. PEARSON.....	42
Ethylene Glycol Toxicity. KEVIN E. BOVE.....	46
Primary Hyperparathyroidism with Parathyroid Hyperplasia and Adenoma in a Single Gland. JAMES C. HARRIS, DAVID ROSENBAUM, AND LEO OLINER.....	51
Use of Hematocrit Values in Evaluation of Red Cell Survival with Chromium-51. JOHN D. MILAM, MONROE S. SAMUELS, JOHN Y. HIDALGO, AND ROGER A. BURKE.....	56
Evaluation of Fibrinolysis in Hepatic Cirrhosis. Relation of Serial Thrombin Time and Euglobulin Lysis Time. ISADORE BRODSKY AND LEWIS H. DENNIS.....	61
A Simplified Procedure for the Determination of Total Bile Pigments in Jaundiced Serum. RAY A. ZARODA.....	70
The Antigen in Autoimmune Hemolytic Anemia. I. Reactivity of Human Autoantibodies and Rhesus Antibodies with Primate and Non-Primate Erythrocytes. BERNARD PIROFSKY AND KATHERINE PRATT.....	75
The Micro-Methemoglobin Reduction Test for Glucose 6-Phosphate Dehydrogenase Deficiency. A Simple Field Screening Procedure. CONRAD A. KNUTSEN AND GEORGE J. BREWER.....	82
Microbiology Experience in Collection of Human Tissue. TATE M. MINCKLER, GUY R. NEWELL, WILLIAM F. O'TOOLE, GEN NIWAYAMA, AND PAUL H. LEVINE.....	85
A Disposable Micropipet Method for Performing Reticuloendothelial Clearance Studies in Small Animals. FRANCIS J. GNABASIK, GEORGE S. GROCH, JAMES J. DINEEN, JR., AND STUART C. FINCH.....	93
Letter to the Editor: Carcinoma of Prostatic Ducts. HAMPTON R. BATES, JR., AND JOHN L. THORNTON.....	96
<i>In Memoriam:</i> Charles C. T. Chow, M.D. GEORGE P. BLUNDELL.....	98
Book Reviews.....	99

Technical Section

The Prothrombin Consumption Time Test. ARMAND J. QUICK.....	105
An Improved Water-Bath for Coagulation Tests. E. RICHARD CRIST.....	110
Recording Osmotic Fragility of Red Cells on the Spinco Analytrol. TURMAN E. ALLEN AND CHARLES E. SHIELDS.....	112

Number 2, February 1966

Photograph

Albert L. McQuown, President, American Society of Clinical Pathologists, 1965-1966.....	115
Fluorescent Antibody Technic as a Routine Procedure in the Diagnosis of Lupus Erythematosus, Using Stored Tissue Culture Cells. N. M. MUNA, J. L. VERNER, AND D. F. HAMMOND.....	117
The Use of Formalin-Preserved Erythrocytes in Quality Control. NORVAL MORTENSEN AND HERMAN O. HOWELL.....	122
Identification of Enteropathogenic <i>Escherichia coli</i> in Pregnant Women, Using Cultural and Fluorescent Antibody Technic. B. A. BATSHON.....	125
The Accuracy of Venous and Capillary Blood for the Prediction of Arterial pH, $\text{PCO}_2$ , and $\text{PO}_2$ Measurements. RALPH C. JUNG, OSCAR J. BALCHUM, AND FRANK J. MASSEY.....	129
Increased Red Cell and Resin Uptake of L-Triiodothyronine Caused by Use of Acetate Plastic Test	

Tubes, W. NEWLON TAUVE, DOROTHY JENKINS, VIRGINIA STELLMACHER, AND ELAINE CUKLANZ.....	139
Analysis of 17-Hydroxy-Corticoids in Urine and Blood by Gas-Liquid Chromatography. A. ANNE PATTI, THOMAS F. FRAWLEY, AND ARTHUR A. STEIN.....	142
Statistical Quality Control of Rabbit Brain Thromboplastin for Clinical Use in the Prothrombin Time Determination. LYMAN M. FISHER AND BETTY LOU HUMPHRIES.....	148
A Simple Mail-In Method for Chromosome Analysis. T. R. BIRDWELL, R. R. EGGEN, AND R. M. DIMMETTE.....	153
Urinary and Serum Zinc Levels in Chronic Alcoholism. HAROLD L. HELWIG, EMANUAL M. HOFFER, WILLIAM C. THIELEN, ARTHUR E. ALCOCER, DAVID R. HOTELLING, WILLIAM H. ROGERS, AND JOEL LENCH.....	156
Modified Zinc Analysis Method and Serum and Urinary Zinc Levels in Control Subjects. HAROLD L. HELWIG, EMANUAL M. HOFFER, WILLIAM C. THIELEN, ARTHUR E. ALCOCER, DAVID R. HOTELLING, AND WILLIAM H. ROGERS.....	160
A New Thymol Turbidity Standard. PATRICK V. FERRO AND ANNA BELL HAM.....	166
An Appraisal of the Electronic Particle Counter as a Screening Technic for Cervical Neoplasia. HENRY W. VAILLANT AND RALPH M. RICHART.....	172
Pseudogranulomatous Mastocytic Lymphadenitis. A Case of Systemic Mastocytosis with Distinctive Lymph Nodal Changes. ELLSWORTH R. LITTLER, JR.....	180
Colitis Cystica Profunda. STEFAN ELLIS EPSTEIN, WILLIAM Q. ASCARI, RONALD C. ABLOW, WILLIAM B. SEAMAN, AND RAFFAELE LATTE.....	186
Fitting the Old-Fashioned Autopsy into the Modern Medical Scene. ALFRED ANGRIST.....	202
Letters to the Editor:	
MARGARET E. WAID AND ROBERT G. HOFFMANN.....	208
Dr. Barnett's Reply. ROY N. BARNETT.....	209
Editorial Comment. THE EDITORS.....	209
<i>In Memoriam:</i>	
Lloyd F. Catron, M.D. JOHN G. LIM.....	210
<i>Technical Section</i>	
A Technic Which Increases the Sensitivity of the Antigen-Antibody Reaction. L. V. MILNER.....	211
Variable Results from Triple Sugar Iron Agar in Screw-Capped Tubes. HARRIET H. SMITH AND CHERYL ANDERSON-LANGMUIR.....	218
Hemolysis by Urinary <i>Escherichia coli</i> . JAMES McGEACHIE.....	222
Perineal Prep with pHisoHex. A Source of Error in Urinalysis. ROBERT J. CEREMSAK AND DEWEY SANDERSON.....	225
A Program for Automated Hematoxylin and Eosin Staining. DANIEL S. LONGNECKER.....	229
Book Review.....	230
<b>Number 3, March 1966</b>	
Pathology's Obligations and Responsibilities in Meeting the Challenges of Modern Medical Practice.	
President's Address. WILLIAM O. RUSSELL.....	231
Site of Origin of the Luminal Foam Cells of Atherosclerosis. MEYER FRIEDMAN, SANFORD O. BYERS, AND SHIRLEY ST. GEORGE.....	238
Absence of One Umbilical Artery. Analysis of 20 Cases in a 5-Year Study. JOSEPH R. CIPPARONE.....	247
Bone Marrow Aspiration in the Antemortem Diagnosis of Primary Systemic Amyloidosis. ROBERT A. KYLE, GERTRUDE L. PEASE, HELEN RICHMOND, AND LOUISE SULLIVAN.....	252
<i>Pneumocystis carinii</i> Pneumonia in Two Adults with Multiple Myeloma. MARY LOU CALLERAME AND MARTIN NADEL.....	258
Intestinal Phycomycosis (Mucomycosis). SIMON CALLE AND STANLEY KLATSKY.....	264
Relation of the Viscosity of Plasma and Whole Blood. GEORGE A. MAYER.....	273
Automatic Simultaneous Determination of Total Serum Protein and Serum Albumin. JOHN D. RICE, JR.....	277
Glass Electrode Determination of Blood Sodium and Potassium. H. D. PORTNOY AND E. S. GURDJIAN.....	283
Determination of Serum Calcium by Means of Orthocresolphthalein Complexone. HAROLD V. CONNERTY AND ANGLIS R. BRIGGS.....	290

The Analysis of Blood Glucose Using Stable Dry Specimens. ERIC G. COMSTOCK AND BETSY S. COMSTOCK.....	297
Lactate Dehydrogenase in Megaloblastic Bone Marrow. JOSEPH A. LIBNOCH, VINCENT J. YAKULIS, AND PAUL HELLER.....	302
Macroglobulins and the Sia Water Test. HORACE H. ZINNEMAN AND ULYSSES S. SEAL.....	306
Anti- $\gamma$ -Globulin and Antinuclear Factors in Chronic Bronchitis. Relation of Disease Course and Hyperglobulinemia. L. BONOMO, U. GILLARDI, AND A. TURSI.....	313
Electrophoretic Precipitin Test on Cellulose Acetate. F. A. ZYDECK, E. E. MUIRHEAD, AND H. SCHNEIDER.....	323
Corrections.....	328
Letters to the Editor:	
Roy N. BARNETT.....	329
Dr. Berry's Reply. ROLAND E. BERRY.....	330
News and Notices.....	331
Organization Section.....	332
Book Review.....	338

#### Technical Section

Automated Determination of Uric Acid by the Hydroxylamine Method. A. WENDELL MUSSER AND CORPUS ORTIGOZA.....	339
An Automated Procedure for Total Organic Iodine. ELIZABETH AUSTIN AND JOHN A. KOEPEK.....	344
Effects of Albumin Concentration on Compatibility Tests for Blood Transfusion. ALI A. HOSSAINI.....	348
Sputum Digestion. I. The Mortality Rate of Tubercle Bacilli in Various Digestion Systems. IRVING KRASNOW AND LAWRENCE G. WAYNE.....	352
A Storage Humidity Chamber for Hemocytometers. W. F. BLATT, H. A. SEGAL, AND J. L. GRAY.....	356
Observations on an Automated Method for Determination of Serum and Urine Calcium. With Special Reference to the Effect of Magnesium. DEAN A. ARVAN.....	358
A Simple, Rapid, Precise Stain for Intestinal Protozoa. NELDA ALGER.....	361
A Simple Method of Permanent Staining of Intestinal Parasites, Using Dimethyl Sulfoxide. HUGH L. MITCHELL.....	363
News and Notices.....	365
Book Review.....	366

#### Number 4, April 1966

The Long-Term Effects of Repeated Plasmapheresis. LAURENCE R. SIMSON, DONNA M. LIEN, CAROL L. WARNER, AND HAROLD A. OBERMAN.....	367
A Method for Preparing Plasma Factor VIII (Antihemophilic Globulin) Concentrate. LAURENCE R. SIMSON, HAROLD A. OBERMAN, JOHN A. PENNER, DONNA M. LIEN, AND CAROL L. WARNER.....	373
Serum Creatine Phosphokinase in 4 Generations of a Muscular Dystrophy Family. SALLY KELLY, WILLIAM D. KELLY, AND HERBERT L. SWIFT.....	377
Studies of the Serum Proteins. VII. Sucrose Gradient Electrophoresis. F. WILLIAM SUNDERMAN, JR., AND MARVIN W. JOHNSON.....	381
Serum Immunoglobulin Levels in Sarcoidosis. R. A. PATNODE, R. C. ALLIN, AND R. L. CARPENTER.....	398
Light and Electron Microscopic Localization of Acid Phosphatase Activity in Human Eosinophils. JOHN J. GHIDONI AND ARTHUR F. GOLDBERG.....	402
The Measurement of CO <sub>2</sub> Content with the AutoAnalyzer. A Comparison with 3 Standard Methods and a Description of a New Method (Alkalinization) for Preventing Loss of CO <sub>2</sub> from Open Cups. S. RAYMOND GAMBINO AND HARRY SCHREIBER.....	406
An Evaluation of Some Disinfectants. ESTHER L. CHEATLE AND ROY W. SNYDER.....	412
Pulmonary Alveolar Proteinosis. Diagnostic and Pathologic Implications of Pulmonary Washings. JOSE RAMIREZ-RIVERA, MICHAEL LIEBMAN, AND JOHN C. BARTONE.....	415
Inflammatory Fibroid Polyps of the Gastrointestinal Tract. A Report of 3 Cases, 2 Occurring in Children. THOMAS G. SAMTER, DAVID F. ALSTOTT, AND GERALD J. KURLANDER.....	420
The Central Giant Cell Reparative Granuloma of the Jaws. An Analysis of 38 Cases. CHARLES A. WALDRON AND WILLIAM G. SHAFER.....	437
Demonstration of the Presence of Beryllium in Pulmonary Granulomas. JAMES R. PRINE, SOLOMON F. BROKESHOULDER, DUNCAN E. MCVEAN, AND F. R. ROBINSON.....	448

Morphology of the Sweat Apparatus in Cystic Fibrosis. JACQUELINE BARTMAN AND BENJAMIN H. LANDING.....	455
Erythropoiesis in the Human Thymus. S. ALBERT, PAUL L. WOLF, I. PRYJMA, AND J. VAZQUEZ.....	460
Cholecystitis and Stenotic Arteriosclerosis. BRIAN M. MORE, WALTER F. MERDINGER, AND SHELDON C. SOMMERS.....	465
Polyarteritis Nodosa Presenting as Acute Cholecystitis. IRA S. SCHWARTZ, HARVEY MENDELOW, AND LESTHER WINKLER.....	468
Primary Dissecting Aneurysm of the Renal Artery. Report of a Case and Review of the Literature. GARTH W. ENGLUND.....	472
A Device for Viewing 35-Mm. Film-Mounted Specimens. ROBERT M. McCULLY, BRUCE H. SMITH, LEE G. LUNA, AND OLIVER D. HUTSON.....	480
<i>In Memoriam:</i>	
Robert M. Moore, M.D. KENNETH M. HEARD.....	483
News and Notices.....	484
Correction.....	484
Book Reviews.....	485

#### Technical Section

Antibiotic Susceptibility Testing by a Standardized Single Disk Method. A. W. BAUER, W. M. M. KIRBY, J. C. SHERRIS, AND M. TURCK.....	493
Diagnosis of Enterobacteriaceae in the Hospital Laboratory. G. W. DOUGLAS, C. O'CONNOR, AND V. M. YOUNG.....	497
A New Cultural Medium for Medical Bacteriology. PAUL D. ELLNER, CAROLE JEAN STOESSEL, ELAINE DRAKEFORD, AND FRANK VASI.....	502
Gel Reactions in Serums Containing Immunoglobulin Abnormalities. D. J. COMFORT.....	505
Improved Immunodiffusion Template for Gel Media. CALVIN A. SARAVIS.....	507
Evaluation of a Bilirubin Screening Test. CLAUDIA HART AND DAVID PLAUT.....	510
A Transparent Dialyzer Bath for Automated Flow Systems. JOSEPH S. ANNINO.....	512
A Technic for Preparation of Specimens of Whole-Mounted Helminths for Microscopic Study. CLEMITH J. HOUSTON.....	515
Automated Color Film Processing in the Pathology Laboratory. DONALD S. MACNAIR.....	517
Book Reviews.....	520

#### Number 5, May 1966

Serial Histologic Alterations in Human Renal Homotransplants. EMIL W. PETERSON, JOHN J. MCPHAUL, JR., AND DUNCAN A. MCINTOSH.....	521
The Determination of Serum Iron and Iron-Binding Capacity by Atomic Absorption Spectroscopy. ALFRED ZETTNER, LAWRENCE C. SYLVIA, AND LUIS CAPACHO-DELGADO.....	533
Urinary $\gamma$ -Globulin Excretion in Systemic Lupus Erythematosus. F. MIYASATO, VICTOR E. POLLAK, AND RAYMOND BARCELLO.....	541
Rapid Colorimetric (Tetrazolium Salt) Assay for Lactate Dehydrogenase. RUSSELL O. BRIERE, JOSEPH A. PRESTON, AND JOHN G. BATSAKIS.....	544
Serial Dilution Antibiotic Sensitivity Testing with the Microtitrator System. JESSE H. MARYMONT, JR., AND ROBERT M. WENTZ.....	548
Observations on Circulating Antibody Responses to Mycobacterial Stimuli. R. C. PARLETT AND Y. M. CHU.....	552
Meningitis Caused by <i>Pasteurella ureae</i> . WEN LAN LOU WANG AND GABRIEL HAIBY.....	562
Abnormal Platelet Function in Myelofibrosis. PAUL DIDISHEIM AND DOROTHY BUNTING.....	566
Infectious Mononucleosis. Some Observations on the Cellular Localization of Immune Globulin Synthesis. R. L. CARTER.....	574
Refractory Normoblastic ("Sideroblastic") Anemia. Clinical and Electron Microscopic Observations. LAWRENCE D. PETZ, JOSEPH R. GOODMAN, SHIRLEY G. HALL, AND DIANE J. FINK.....	581
Failure of Methylene Blue to Produce Methemoglobinemia <i>in Vivo</i> . THOMAS P. STOSSEL AND ROBERT B. JENNINGS.....	600
Thrombotic Microangiopathy and Malignant Hypertension. VICTORIANO PARDO AND AKIO ABURANO.....	605
Leprechaunism (Donohue's Syndrome). A Possible Case, with Emphasis on Changes in the Adenohypophysis. DONALD R. ROGERS.....	614

A Film-Dissolve Technic for Demonstration of Blood Vessels, Traced in Serial Sections. C. A. WAGENVOORT, W. DE VOGEL, AND C. J. VAN DER GROND.....	620
Correction.....	623
News and Notices.....	623
Laboratory Suggestion: A Simple Means for Removing Tissue Blocks from a Frozen Section Freezing Head. DAVID SOHN.....	624
Letter to the Editor. M. J. LEITNER.....	624
<i>In Memoriam:</i>	
Salvador S. Trinidad, M.D. JAMES R. LISA.....	625
Helen F. Craig, M.D. JOHN C. McCARTER.....	625
Ben C. Sher, Ph.D. J. ROBERT THOMPSON.....	626
Franklin Johnson Moore, M.D. HARRY E. WEISBERG.....	627
Book Review.....	628

*Technical Section*

Simplified Autohemolysis for Routine Clinical Use. Experience with 250 Cases. JOHN E. KOSTINAS, RICHARD A. WETZEL, AND EDWARD F. CANTOW.....	629
Serum Haptoglobin. Automated Method Applied to Patient Screening. STANLEY BURROWS AND EDWARD B. HOSTEN.....	634
Differentiation of Pathogenic Pseudomonads by Heat Resistance of Alkaline Phosphatase. PINGHUI V. LIU.....	639
A Rapid Method for the Concentration of Cerebrospinal Fluid Proteins Prior to Paper Electrophoresis. JOHN N. WHITAKER AND HELIO LEMMI.....	643
Screening for Elevated Serum Phenylalanine Levels by Means of a Simple and Practical Chromatographic Method. KAREL SINGER.....	647
Selective Screening for Quantitative Urine Cultures. O. L. WEISER AND J. S. EMERSON.....	649
Laboratory Suggestion: A Device to Facilitate the Preparation of the AutoAnalyzer Dialyzer Membrane. JOHN S. ZAJAC.....	651

**Number 6, June 1966**

Gastric Lymphosarcoma. Clinicopathologic Analysis of 71 Cases and Its Relation to Disseminated Lymphosarcoma. JULIAN I. JOSEPH AND RAFFAELE LATTE.....	653
Peyronie's Disease. BRUCE H. SMITH.....	670
Elastofibroma. J. ROBIN BARR.....	679
"Pseudorheumatoid" Subcutaneous Nodules. BRUCE W. MESARA, GERALD L. BRODY, AND HAROLD A. OBERMAN.....	684
Ganglioglioma of the Brain Stem. J. G. RICHMOND, D. L. CUNNINGHAM, F. G. FUSTE, AND CYRUS C. ERICKSON.....	692
Disseminated Aspergillosis. Case Report and Review of the World Literature. TAN KHENG KHOO, KENJI SUGAI, AND TAN KIM LEONG.....	697
Recent Improvements of Histologic Technics for the Combined Light and Electron Microscopic Examination of Surgical Specimens. JOSEPH A. LYNN, JAMES H. MARTIN, AND GEORGE J. RACE.....	704
The Immunofluorescent Tumor Imprint Technic. I. Description and Evaluation. THOMAS K. BURNHAM, THOMAS R. NEBLETT, AND GERALD FINE.....	714
Carcinoma Cells in Bone Marrow Aspirates. PETER F. STONIER AND PAUL V. EVANS.....	722
Vacuoles in Synovial Fluid Leukocytes. THEODORE I. MALININ, THOMAS J. PEKIN, JR., HEINZ BAUER, AND NATHAN J. ZVIAIFLER.....	728
Correction.....	731
Antepartum Culture Findings of Mothers in Relation to Infantile Diarrhea. RICHARD ROSNER.....	732
News and Notices.....	736
Clinical Application and Interpretation of the Serum Lactic Dehydrogenase Zymogram. EARL J. WRIGHT, LEO P. CAWLEY, AND LUCILE EBERHARDT.....	737
Application of a Rapid Cephalin-Cholesterol Floculation Test in Liver Profile Studies. C. RAY RATLIFF AND G. STEPHEN THRASHER.....	746
Anti-D in a D-Positive Man, with Positive Direct Coombs Test and Normal Red Cell Survival. C. R. MACPHERSON, T. D. STEVENSON, AND J. GAYTON.....	748

## Letters to the Editor:

A Reason for a High MCHC. ROBERT W. PRICHARD..... 751  
Dr. Penistan's Reply. J. L. PENISTAN..... 751

## In Memoriam:

Richard G. McManus, M.D. W. GLENN REED..... 752  
Helen Rhodes Prieto, M.D. C. H. STEFFEE..... 753  
Book Reviews..... 754

*Technical Section*

A Rapid Microtechnic Applied to the Heterophile Antibody Test for the Detection of Infectious Mononucleosis. EDITH REINISCH AND LEO HALL..... 755  
A Rapid Kinetic Method for Determination of Serum  $\alpha$ -Hydroxybutyrate Dehydrogenase. PETER A. BENSON AND WILLIAM H. BENEDICT..... 760  
Immunologic Studies of Tuberculoprotein-C with Human Serums by Parlett Gel-Diffusion Technic. LILLIAN M. PAGE AND T. J. CZEKOWICZ..... 764  
Preparation of Tuberculosis Susceptibility Testing Mediums by Means of Impregnated Disks. LAWRENCE G. WAYNE AND IRVING KRASNOW..... 769  
A Two-Minute Assay Technic for pH and  $\text{PCO}_2$  Utilizing an Ultramicro pH/ $\text{PCO}_2$  Electrode. S. RAYMOND GAMBINO AND HARRY SCHREIBER..... 772  
A Simplified Manual Plasma Glucose Method (in Conjunction with Automated Analysis). DAVID K. DAVIS..... 775  
A Semiautomatic Marking Device for Microscope Slides. DEAN LUSTED..... 778  
Laboratory Suggestion:  
A Collection Box for Specimens. GUIDO CONTRONI AND YU YIN CHEN..... 782  
Index of Subjects, Volume 45, January-June, 1966..... 785  
Index of Authors, Volume 45, January-June, 1966..... 793  
Table of Contents, Volume 45, January-June, 1966..... iii

## INDEX OF SUBJECTS

### Original articles

Acid-base methodology, report of the *Ad Hoc* Committee on, 376

Acknowledgment 658

Amniotic fluid bilirubin, measurement of, with Jendrassik and Grof method, 198

Anatomic pathology

- adrenal glands, pheochromocytoma, 599
- appendix, follicularis suppurativa, 641
- blood vessels, luetic aneurysms of aortic valve, 99
- bone marrow, acute promyelocytic leukemia, 214
- brain
  - central pontine myelinolysis, 239
  - granulomatous infections, 305
  - Hartmannella* (*Acanthamoeba*), 226, 305, 496
  - medulloblastoma with extracranial metastasis through ventriculovenous shunt, 245
  - meningoencephalitis due to *Hartmannella* (*Acanthamoeba*), 226
- breast, nonpalpable breast cancers discovered by radiography, 330
- fungi, systemic chromoblastomycosis due to *Hormodendrum dermatitidis*, 103
- heart
  - intrapericardial fat pads, 92
  - luetic aneurysms of aortic valve, 99
  - multiple polypoid thrombi of right atrium, 556
- kidney, glomerulonephritis, 295
- liver
  - cirrhosis, 239
  - serum enzymes and morphologic alterations, 82
- lung
  - blastoma, 322
  - carcinoma *in situ*, of peripheral (bronchiolar) origin, 315
  - giant-cell carcinoma, 427
  - herpes simplex involvement, 411
  - human and experimental cancer, 1
  - surfactant in immature infant, 649
- lymph nodes, histopathology, after lymphangiography, 335
- nervous system, neuroblastoma, 599
- tissues
  - fluorochromatic stain for frozen section diagnosis, 503
  - modification of Brown-Brenn Gram stain, 472
  - polarized light produced by binocular microscopes, 568
  - sparganosis, 645
- uterine cervix, squamous papillomas, 115
- uterus, small "angiomatous" tumors of myometrium (letter), 382

vagina, melanomas, 420

### Antibiotics

- effect of medium on anaerobic variation in sensitivity of staphylococci to penicillins, 55
- resistance of *Klebsiella-Aerobacter-Serratia* division to cephalothin and ampicillin, 589

### Apparatus

- continuous analysis of sulfobromophthalein in laboratory animals, 89
- hollow pneumatic ram as serum separator, 289
- polarized light produced by binocular microscopes, 568
- simple staining unit for coverslips, 162
- table-top cold plate for chilling blocks in paraffin embedding process, 160

Appendicitis follicularis suppurativa, 641

Atomic absorption spectroscopy, recorder curve integration for quantitating trace metals in serum, 63

Automated submicrochemistries, 265

Autologous serum proteins, active immunity to, 362

### Bacteriology

- β*-galactosidase demonstration of diagnostic bacteriology, 702
- comparison of bile and trypticase soy broth for isolating *Salmonella* from blood, 408
- Corynebacterium pseudotuberculosis*, human infection, 562
- effect of medium on anaerobic variation in sensitivity of staphylococci to penicillins, 55
- fluorochrome staining of mycobacteria, 587
- meningitis due to *Mima polymorpha*, 234
- modification of Brown-Brenn Gram stain for Gram-positive and Gram-negative bacteria in tissue sections, 472

nitrite screening test for bacteruria, 702

resistance of *Klebsiella-Aerobacter-Serratia* division to cephalothin and ampicillin, 589

*Shigella alkalescens* as cause of hemorrhagic cystitis, 225

shigellemia without *Shigella* diarrhea, 221

significance of *Klebsiella enteritis*, 632

streptococcal septicemia, sudden death from, 373

Blastoma, pulmonary, a form of carcinosarcoma, 322

### Blood

- acute promyelocytic leukemia, 214
- comparison of bile and trypticase soy broth for isolating *Salmonella* from blood, 408
- coulometric determination of thallium in blood and urine, 185
- filter paper PKU test specimen cards in auto-

**Original articles—Continued****Blood—Continued**

- mated determination of blood phenylalanine concentration, 486
- histoplasmosis in peripheral blood, 158
- malarial parasites, 155
- mechanism of thrombocytopenic bleeding, 204
- monitoring quality of blood cell counts with replicate determinations on routine samples, 286
- obtaining large quantities of blood from rabbits, 704
- one-step method for counting leukocytes and platelets, 576
- rapid vapor phase method for determining ethanol in blood and urine by gas chromatography, 152
- Blood coagulation**
  - effect of sample volume and hematocrit on one-stage prothrombin time with oxalated plasma, 449
  - further evidence for a simpler view of coagulation of blood, 612
  - mechanism of thrombocytopenic bleeding, 204
  - reproducibility of prothrombin time determinations between technologists, 148
  - solid state whole blood coagulation time device, 463
  - three-hour prothrombin consumption test in siliconized glass, 48
  - whole blood dilution test for coagulability, 455
- Cancer**
  - carcinoma *in situ* of lung of peripheral (bronchiolar) origin, 315
  - giant-cell carcinoma of lungs, 427
  - human and experimental lung cancer, 1
  - melanomas of vagina, 420
  - pulmonary blastoma, a form of carcinosarcoma, 322
  - radiographic discovery of nonpalpable breast cancers, 330
  - VMA screening test for pheochromocytoma and neuroblastoma, 599
- Central pontine myelinolysis and cirrhosis of the liver**, 239
- Chemistry**
  - acid-base methodology, report of *Ad Hoc Committee on*, 376
  - acrylamide gel electrophoretic determination of serum-hemoglobin binding capacity and haptoglobin-type, 385
  - atomic absorption spectroscopic quantitation of trace metals in serum, 63
  - automated determination of sweat electrolytes, 65
  - automated submicrochemistries, 265
  - automated system for fluorometric determination of serum lactate dehydrogenase, 69
  - comparison of laboratory performance using frozen serum unknowns, 193
  - continuous analysis of sulfobromophthalein in laboratory animals, 89
  - correlation of serum enzymes and morphologic alterations of the liver, 82
  - coulometric determination of thallium in blood and urine, 185
  - creatine phosphokinase determination by fluorescent ninhydrin reaction, 177
  - currently popular thyroid function tests, comparison of, 189
  - cystinuria associated with mongolism and identification of abnormal pyrrolidine compound in urine, 442
  - evaluation of ethanol measurements with alcohol dehydrogenase, 608
  - filter paper electrophoretic quantitative determination of  $A_2$  hemoglobin, 483
  - filter paper PKU test specimen cards for automated determination of blood phenylalanine concentration, 486
  - fluorometric micro method for serum tocopherol, 133
  - gas chromatographic determination of estrogen and progesterone metabolites in urine in pregnancy, 352
  - Guthrie test for phenylketonuria, 504
  - lectins for detecting leukocyte antigens, 507
  - millimolar extinction coefficient of cyanmethemoglobin from direct measurements of hemoglobin iron by x-ray emission spectrography, 603
  - modification of Bohoum dye method for serum magnesium, 594
  - micro saccharogenic method for serum amylase determination, 582
  - micro-technic for hemoglobin electrophoresis, 144
  - modifications in the *Lactobacillus casei* assay of serum folate activity, 390
  - normal values for SGOT and LDH activities, 397
  - pulmonary surfactant in the immature infant, 649
  - quantitation of ethyl alcohol in vitreous humor and blood by gas chromatography, 349
  - quantitative analysis of 4-hydroxy-3-methoxy-mandelic acid by direct photometric scanning of urinary extracts separated by thin-layer chromatography, 163
  - rapid vapor phase method for determining ethanol in blood and urine by gas chromatography, 152
  - revised calculations for total serum proteins by

refractometry and for total base (and sodium) by conductivity, 679

separation and quantitation of LDH isoenzymes on cellulose acetate, 401

separation of urinary amino acids by thin-layer high voltage electrophoresis and chromatography, 139

tryptophan load and pyridoxine deficiency, 345

ultramicro serum L-lactate determination not requiring removal of protein, 405

vacuum tube in acid-base and blood gas studies (letters), 656

wheat germ glutamic-aspartic apotransaminase determination of plasma pyridoxal phosphate, 282

**Chromatography**

- determination of estrogen and progesterone metabolites in urine in pregnancy by gas chromatography, 352
- quantitative analysis of 4-hydroxy-3-methoxy-mandelic acid by direct photometric scanning of urinary extracts separated by thin-layer chromatography, 163
- quantitation of ethyl alcohol in vitreous humor and blood by gas chromatography, 349.
- rapid vapor phase method for determining ethanol in blood and urine by gas chromatography, 152
- thin-layer high voltage electrophoresis and chromatography for separation of urinary amino acids, 139
- thin-layer screening test for detecting users of morphine or heroin, 58

**Clinical pathology**, who speaks for, 505

Conjugated catecholamines in human urine, 172

*Corynebacterium pseudotuberculosis*, human infection, 562

Cytology, simplified method of staining cytology smears by Papanicolaou method, 596

**Electron microscopy**

- glomerulonephritis, observations by light and electron microscopy, 295
- observations of phagocytized red cells containing Heinz bodies, 538
- plasmacytic reticulum cell sarcoma, 546
- rapid polychrome stain for epoxy-embedded tissue, 250
- staining epoxy-embedded specimens for light microscopy with polychromatic stain Paragon-1301, 252

**Electrophoresis**

- determination of serum-hemoglobin binding capacity and haptoglobin-type by acrylamide gel electrophoresis, 385
- filter paper electrophoretic quantitative determination of A<sub>2</sub> hemoglobin, 483

micro-technic for hemoglobin electrophoresis, 144

separation of urinary amino acids by thin-layer high voltage electrophoresis and chromatography, 139

thin gel electrophoresis in agarose, 692

**Endocrinology**

- comparison of currently popular thyroid function tests, 189
- gas chromatographic determination of estrogen and progesterone metabolites in urine in pregnancy, 352
- measurement of conjugated catecholamines in human urine, 172

*Endolimax nana*, atypical nuclei of, in purged stool specimens, 490

*Endolimax nana* trophozoites, increase in number of, with typical nuclei in serial samples of purged stool specimens, 494

**Enzymology**

- automated system for fluorometric determination of serum LDH, 69
- β-galactosidase demonstration in diagnostic bacteriology, 702
- correlation of serum enzymes and morphologic alterations of the liver, 82
- creatine phosphokinase determination by fluorescent ninhydrin reaction, 177
- determination of plasma pyridoxal phosphate with wheat germ glutamic-aspartic apotransaminase, 282
- evaluation of ethanol measurements with alcohol dehydrogenase, 608
- normal values for SGOT and LDH activities, 397
- separation and quantitation of LDH isoenzymes on cellulose acetate, 401
- micro saccharogenic method for serum amylase determination, 582

Fluorometric micro method for serum tocopherol, 133

Fluorescent ninhydrin reaction for determination of creatine phosphokinase, 177

**Forensic science**

- evaluation of ethanol measurements with alcohol dehydrogenase, 608
- quantitation of ethyl alcohol in vitreous humor and blood by gas chromatography, 349
- streptococcal septicemia as cause of sudden death, 373
- thin-layer chromatographic screening test for detection of users of morphine or heroin, 58

Giant-cell carcinoma of the lungs, 427

Glomerulonephritis, observations by light and electron microscopy, 295

**Original articles—Continued**

Granulocytic series, changes in, in infectious mononucleosis, 43

Hartmannella (Acanthamoeba)  
experimental chronic, granulomatous brain infections produced by new isolates of low virulence, 305

experiments in preservation and detection of trophozoites and amebic cysts in infected tissue, 496

meningoencephalitis due to, 226

Heat-modified rheumatoid arthritis test, 440

Heinz bodies, observations of phagocytized red cells containing, 538

Helwig, Elson B., recipient of President's award for distinguished federal civilian service, 259

Hematology  
acrylamide gel electrophoretic determination of serum-hemoglobin binding capacity and haptoglobin-type, 385

acute promyelocytic leukemia, 214

capillary screening test for infectious mononucleosis, 395

effect of exercise on red blood cell in marsh hemoglobinuria, 341

effect of sample volume and hematocrit on one-stage prothrombin time with oxalated plasma, 449

filter paper electrophoretic quantitative determination of  $A_2$  hemoglobin, 483

infectious mononucleosis  
changes in granulocytic series, 43  
complicated by hemolytic anemia due to anti-i, 616

mechanism of thrombocytopenic bleeding, 204

microcapillary technic for red blood cell osmotic fragility, 392

millimolar extinction coefficient of cyanmethemoglobin from direct measurements of hemoglobin iron by x-ray emission spectrography, 603

monitoring the quality of blood cell counts with replicate determinations on routine samples, 286

one-step method for counting leukocytes and platelets, 576

observations of phagocytized red cells containing Heinz bodies, 538

plasmacytic reticulum cell sarcoma, 546

reproducibility of prothrombin time determinations between technologists, 148

solid state whole blood coagulation time device, 463

three-hour prothrombin consumption test in siliconized glass, 48

variance of leukocyte counts performed with the Hemocytometer, Coulter, and Fisher instruments, 684

whole blood dilution test for coagulability, 455

Hemoglobin electrophoresis, rapid micro-technic for, 144

Herpes simplex involvement of lower respiratory tract, 411

Histologic technic  
fluorochromatic tissue stain for frozen section diagnosis, 503

fluorochrome staining of mycobacteria, 587

modification of Brown-Brenn Gram stain for differential staining of Gram-positive and Gram-negative bacteria in tissue sections, 472

polychromatic stain Paragon-1301 as method for staining epoxy-embedded specimens for light microscopy, 252

rapid method of paraffinizing tissue, 597

rapid polychrome stain for epoxy-embedded tissue, 250

simple staining unit for coverslips, 162

table-top cold plate for chilling blocks in paraffin embedding process, 160

water-soluble embedding compound, 500

Histoplasmosis, in peripheral blood, 158

*Hormodendrum dermatitidis* (Kano), Conant as cause of systemic chromoblastomycosis, 103

Immunohematology  
measurement of amniotic fluid bilirubin by method of Jendrassik and Grof, 198

serologic specificity (blood factor) C of the A-B-O groups, 27

transplacental fetal-maternal hemorrhage, 36

use of lectins for detecting leukocyte antigens, 507

weak variant of blood group A similar to  $A_x$  in a Japanese family, 616

Immunology  
incidence of irregular antibodies in a general hospital, 573

observations on heat-modified rheumatoid arthritis test, 440

production of state of active immunity to isologenous and autologous serum proteins, 362

use of immunofluorescence for identification of yeastlike fungi in human infections, 433

use of lectins for detecting leukocyte antigens, 507

Infectious mononucleosis  
capillary screening test for, 395

changes in granulocytic series, 43

complicated by hemolytic anemia due to anti-i, 625

Intrapericardial fat pads and anomalous develop-

ment of septum transversum as cause of pseudocardiomegaly, 92

Isologous serum proteins, production of state of active immunity to, 362

*Kelbsiella enteritis*, significance of, 632

*Lactobacillus casei* assay of serum folate activity, modifications in, 390

Leukocyte counts, variance of, with Hemocytometer, Coulter, and Fisher instruments, 684

Luetic aneurysms of aortic valve, sinus of Val-salva, and aorta, 99

Lymph nodes, histopathology of, after lymphangiography, 335

Malarial parasites, concentration by saponin hemolysis, 155

March hemoglobinuria, effect of exercise on red blood cells in, 341

Medulloblastoma with extracranial metastasis through a ventriculovenous shunt, 245

Melanomas of vagina, 420

Meningitis due to *Mima polymorpha*, 234

Meningoencephalitis due to *Hartmannella* (Acanthamoeba), 226

Microcapillary technic for red blood cell osmotic fragility, 392

Millimolar extinction coefficient of cyanmethemoglobin from direct measurements of hemoglobin iron by x-ray emission spectrography, 603

Multiple polypoid thrombi of right atrium, 556

Mycobacteria, fluorochrome staining of, 587

Mycology

- fungi infections, deep-seated, currently seen in histopathologic service of a medical school laboratory in Britain, 514
- systemic chromoblastomycosis due to *Hormodendrum dermatitidis* (Kano) Conant, 103
- use of immunofluorescent identification of yeastlike fungi in human infections, 433

Parasitology

- atypical nuclei of *Endolimax nana* in purged stool specimens, 490
- deep-seated fungal infections currently seen in histopathologic service of a medical school laboratory in Britain, 514
- Hartmannella* (Acanthamoeba)
  - experimental chronic, granulomatous brain infections produced by new isolates of low virulence, 305
  - experiments in preservation and detection of trophozoites and amebic cysts in infected tissue, 496
  - meningoencephalitis due to, 226
- histoplasmosis in peripheral blood, 158

increase in number of *Endolimax nana* trophozoites with typical nuclei in serial samples of purged stool specimens, 494

malarial parasites; concentration by saponin hemolysis, 155

sparganosis in a Chicago resident originally from Arkansas, 645

Peripheral (bronchiolar) origin of carcinoma *in situ* of the lung, 315

Plasmacytic reticulum cell sarcoma, 546

Polarized light, use of, produced by binocular microscopes, 568

Promyelocytic leukemia, acute, 214

Prothrombin time determinations between technologists, reproducibility of, 148

Pseudocardiomegaly, intrapericardial fat pads and anomalous development of septum transversum as cause of, 92

Pyridoxal phosphate, determination of, with wheat germ glutamic-aspartic apotransaminase, 282

Pyridoxine deficiency, tryptophan load and, 345

Pyrrolidine compound in urine, abnormal, 442

Radiographic discovery of nonpalpable breast cancers, 330

Recorder curve integration for quantitating trace metals in serum by atomic absorption spectroscopy, 63

Saccharogenic method, new micro, for serum amylase determination, 582

Salmonella, comparison of bile and tryppticase soy broth for isolation of, from blood, 408

Serology

- observations on heat-modified rheumatoid arthritis test, 440
- serologic specificity (blood factor) C of the A-B-O groups, 27
- transplacental fetal-maternal hemorrhage, 36

Serum

- automated system for fluorometric determination of serum lactate dehydrogenase, 69
- comparative study of laboratory performance using frozen serum unknowns, 193
- correlation of serum enzymes and morphologic alterations of the liver, 82
- fluorometric micro method for serum tocopherol, 133
- hollow pneumatic ram as serum separator, 289
- modifications in *Lactobacillus casei* assay of serum folate activity, 390
- normal values for SGOT and LDH activities, 397
- ultramicro serum L-lactate determination not requiring removal of protein, 405

*Shigella alkaescens*, as a cause of hemorrhagic cystitis, 225

Shigellemia, without *Shigella* diarrhea, 221

**Original articles—Continued**

Sparganosis, in a Chicago resident originally from Arkansas, 645

Squamous papillomas of uterine cervix, 115

Streptococcal septicemia, sudden death from, 373

Submicrochemistry, automated, 265

Sulfobromophthalein, method for continuous analysis of, in laboratory animals, 89

Sweat electrolytes, automated procedure for determination of, 65

Systemic chromoblastomycosis due to *Hormodendrum dermatitidis* (Kano) Conant, 103

Technologist-pathologist relationships and role of American Society of Clinical Pathologists, 479

Thallium, coulometric determination of, in blood and urine, 185

Thrombocytopenic bleeding, mechanism of, 204

Thyroid function tests, comparison of currently popular, 189

Total serum proteins, revised calculations for, by refractometry, and for total base (and sodium) by conductivity, 679

Transplacental fetal-maternal hemorrhage, 36

Tryptophan load and pyridoxine deficiency, 345

**Urine**

- coulometric determination of thallium in blood and urine, 185
- cystinuria associated with mongolism and identification of an abnormal pyrrolidine compound in urine, 442
- determination of estrogen and progesterone metabolites in urine in pregnancy by gas chromatography, 352
- effect of exercise on red blood cells in march hemoglobinuria, 341
- evaluation of a rapid nitrite screening test for bacteriuria, 698
- Guthrie test for phenylketonuria, 504
- measurement of conjugated catecholamines in human urine, 172
- quantitative analysis of 4-hydroxy-3-methoxy-mandelic acid by direct photometric scanning of urinary extracts separated by thin-layer chromatography, 163
- rapid vapor phase method for determining ethanol in blood and urine by gas chromatography, 152
- separation of urinary amino acids by thin-layer high voltage electrophoresis and chromatography, 139
- tryptophan load and pyridoxine deficiency, 345

Vanilmandelic acid screening test for pheochromocytoma and neuroblastoma, 599

Ventriculovenous shunt, medulloblastoma with extracranial metastasis through a, 245

Virology, herpes simplex involvement of lower respiratory tract, 411

Ward Burdick Award address, contributions of pathology to problems of human and experimental lung cancer, 1

Wheat germ glutamic-aspartic apotransaminase determination of plasma pyridoxal phosphate, 282

**In Memoriam**

Bartkus, Frank A., 383

Creed, Donald L., 478

Grimm, Harold A., 262

Konwaler, Benjamin E., 477

Parsons, Lawrence Buell, 657

Rosenow, Edward Carl, 123

Strauss, Arnold F., 260

Wallace, Stuart Allen, 122

**News and Notices**, 114, 161, 258, 489, 572, 597, 655**Books Received**, 125-131, 659-662**Book Reviews**, 132, 264, 294, 384, 502, 663-678, 706

## INDEX OF AUTHORS

Ajax, E. T., 239  
Alexander, Benjamin, 48  
Amanna, Urmilla, 702  
Anderson, R. C., 89  
Anderson, W. A. D., 1  
Andujar, John J., 226  
Anido, Vicente, 177  
Anmino, Joseph S., 397  
Archer, N. P., 89  
Aronson, Samuel B., 692  
Astrup, P., 376  
Athens, J. W., 684  
Azar, Henry A., 546

Bailey, Patrick V.  
Barnett, Roy N., 148, 440  
Bartlett, Raymond C., 395  
Bates, R. G., 376  
Batsakis, John G., 505, 608  
Bauermeister, Donald E., 322  
Beck, William S., 390  
Beeman, Joseph, 463  
Beland, Arthur H., 322  
Belliveau, Robert R., 289  
Beres, Joseph, 295  
Berg, George, 225  
Berk, J. Edward, 582  
Berkheiser, S. W., 315  
Berry, Roland E., 193  
Berson, Anita W., 599  
Bing, Richard J., 362  
Black, Melvin B., 483  
Boggs, D. R., 684  
Boman, Isabel, 632  
Bouchard, Frances, 162  
Branson, Dorothy, 698  
Briere, Russell O., 608  
Brown, Rosemary St. Clair, 139  
Brown, Wilson G., 144, 599  
Brangle, R. W. (letter), 290  
Browning, David, 221  
Budd, Richard E., 385  
Burrows, Robert B., 490, 494  
Burrows, Stanley, 234

Campbell, E. J. M., 376  
Cantow, Edward F., 43  
Carson, Freida, 160  
Cartwright, G. E., 684  
Castagno, Marie T., 395  
Chiba, Chiyo, 362  
Chinard, F. P., 376  
Christian, Gary D., 185  
Clark, Paula Todd, 486

Cohen, Richard J., 625  
Conboy, John J., 594  
Conlay, V. C., 504  
Conn, Rex B., Jr., 177  
Coon, William W., 345  
Coubis, Richard J., 349  
Culbertson, C. G., 305, 496

D'Agostino, A. N., 239  
Dahl, Elmer V., 152  
Dallenbach-Hellweg, Gisela (letter), 382  
Davidow, Bernard, 58  
Davis, Joyce S., 221  
Davis, Mel A., 594  
DeBaare, Larissa, 405  
De Vries, Andre, 341  
Dutra, Frank R., 286, (letter) 475

Easterling, Robert E., 385  
Elam, James <sup>1</sup>, 65  
Eleviteh, Franklin R., 602  
Englert, E., Jr., 239  
Engstrom, Arden W., 352  
Ensminger, P. W., 305, 496  
Enterline, Melinda L., 692  
Esterly, John R., 649  
Eyckmans, Luc, 408

Fastlich, Eugene, 58  
Feichtmeir, Thomas V., 692  
Ferguson, Ralph, 597  
Ferris, Thomas G., 385  
Fisher, Edwin R., 92  
Fonseca, Ivy, 449  
Freda, Vincent J., 198  
Fruehan, Alice E., 172  
Frumovitz, William A., 645

Gagon, T. E., 684  
Galindo, J., 442  
Gambino, S. Raymond, 198, 376, (letter) 656  
Gennaro, William, 69  
Gerarde, Horace W., 576  
Gevedon, Robert E., 265  
Gilbert, Enid F., 115  
Gochman, Nathan, 265  
Goldstein, Carlos, 48  
Goodman, Paul A., 556  
Gordon, Herschel W., 641  
Gott, James D., 594  
Goulian, Mehran, 390  
Graber, C. D., 221  
Grayson, John W., Jr., 289

Green, David, 455  
 Guillan, Ramon A., 427

Haberman, Sol, 433  
 Hakes, James D., 587  
 Hamilton, Howard B., 616  
 Hansen, Leland G., 133  
 Hayashi, Shinichiro, 582  
 Heilman, Thomas J., 225  
 Helfer, Ray E., 63  
 Henry, Sarah Kay, 599  
 Herout, Vladimir, 411  
 Hook, Edward W., 408  
 Hossaini, Ali A., 507  
 Hsu, Teng Lung, 103

Iammarino, Richard M., 573  
 Innella, Filomena, 625

Jaffurs, William J., 503  
 Jennings, E. R., 36, 322  
 Jimenez, Fidelio A., 500  
 Jobe, Mildred G., 158  
 Johnson, Shirley A., 204  
 Joseph, Julian I., 449  
 Joshua, Henry, 341  
 Judson, Herbert A., 322  
 Jung, Ralph C. (letter), 656

Kaplan, Harold, 449  
 Karpas, Charles M., 632  
 Kattine, Anthony A., 252  
 Kaye, Donald, 408  
 Kazal, Louis A., 455  
 Keffler, Joseph H., 155  
 Khan, Myrna, 163  
 Kidder, L. A., 373  
 Kimmelstiel, Paul, 295  
 King, John D., 245  
 King, Mary J., 234  
 Kingsley, W. B., 160  
 Koch, Marie L., 589  
 Koepke, John A., 158  
 Kostinas, John E., 43  
 Kremers, Beverly, 608

Lance, B. Marcille, 401  
 Langhorne, W. Henry, 189  
 Larsen, Arthur L., 352  
 Lee, George F., 172  
 Levine, Seymour, 99  
 Levy, Stanley H., 556  
 Lewis, Melvyn B., 55  
 Lloyd, B. H., 702  
 Lopez, J. F., 562  
 Lowney, John F., 214  
 Lu, Y. C., 103

Lusted, Dean, 568  
 Lynn, J. A., 250

Mabry, C. Charlton, 265  
 Maenza, Ronald, 449  
 Makeever, L. C., 245  
 Mandell, Gerald H., 556  
 Mann, Frank D., 612  
 Marrack, David, 163  
 Martin, J. H., 250  
 Marymont, Jesse H., Jr., 702  
 Matsuda, Nobuyoshi, 616  
 McCormick, James B., 392  
 McGregor, Robert F., 163  
 McQuay, Russell Michael, 645  
 Miescher, Peter A., 576  
 Miller, A. Pidd, 144  
 Miller, Hugh, Jr., 483  
 Morningstar, Douglas A., 603  
 Morris, Alan, 362  
 Morse, Warren C., 587  
 Motoyoshi, Tetsuza, 362  
 Musser, A. Wendell, 82

Nahas, G. G., 376  
 Nelson, Kenneth J., 385  
 Nickey, W. M., 250  
 Norris, Henry J., 420  
 Noto, A. C., 440

O'Connell, Cornelius J., 55  
 Okano, Hiromitsu, 546  
 Ortigoza, Corpus, 82  
 Osawa, Gengo, 295  
 Osserman, Elliott F., 546  
 Overton, W. M., 305  
 Owens, Jon B., Jr., 144, 599

Palladino, Antonio, 115  
 Palmer, Richard E., 65  
 Palmieri, Michelle, 408  
 Passen, Selvin, 69  
 Patras, Dorothy, 226  
 Patton, Roy B., 330  
 Pechet, Liberto, 48  
 Petri, Nicolo Li, 58  
 Pierce, E. C., 89  
 Pinto, Carmine L., 148  
 Pittman, Gerald R., 214  
 Pomputius, W. F., 92  
 Powsner, Edward R. (letter), 598  
 Poznanski, Andrew K., 330  
 Purdy, William C., 185

Quame, Babington, 58  
 Quesada, J., 562

Race, George J., 160  
Ravel, Richard, 335  
Rezai, Hamid R., 433  
Rice, John D., Jr., 486  
Riddick, Joseph, 82  
Robinson, Farrel R. (letter), 475  
Rocha, Heonir, 408  
Rodgerson, Denis O., 63  
Roeckel, Irene E., 265  
Rose, Harold D., 589  
Rosenblatt, Melvyn, 362  
Russell, William O., 479  
Rutkowski, Roman B., 405  
Rywin, Arkadi M., 641

Sanders, Betty J., 704  
Savitzky, Joseph, 58  
Schnitzer, Bertram, 538  
Schwarzbart, Gunter, 641  
Searcy, Ronald L., 582  
Searle, Bernard, 58  
Senhauser, Donald A., 214  
Shurliif, L. F., 239  
Sigggaard-Andersen, O., 376  
Sciple, G. W., 373  
Skinner, Margaret S., 252  
Smith, Edward B., 538  
Sohn, David, 99  
Sproat, Erma F., 587  
Spurlock, Ben O., 252  
Squires, Raymond B., 189  
Stiles, Dolores, 608  
Stool, Joseph A., 144  
Sturner, William Q., 349  
Sullivan, Margaret P., 163  
Sung, Juei-Low, 103  
Sullivan, John F., 36  
Sunderman, F. William, 679

Suutarinen, Pirjo, 603  
Symmers, William St. Clair, 514

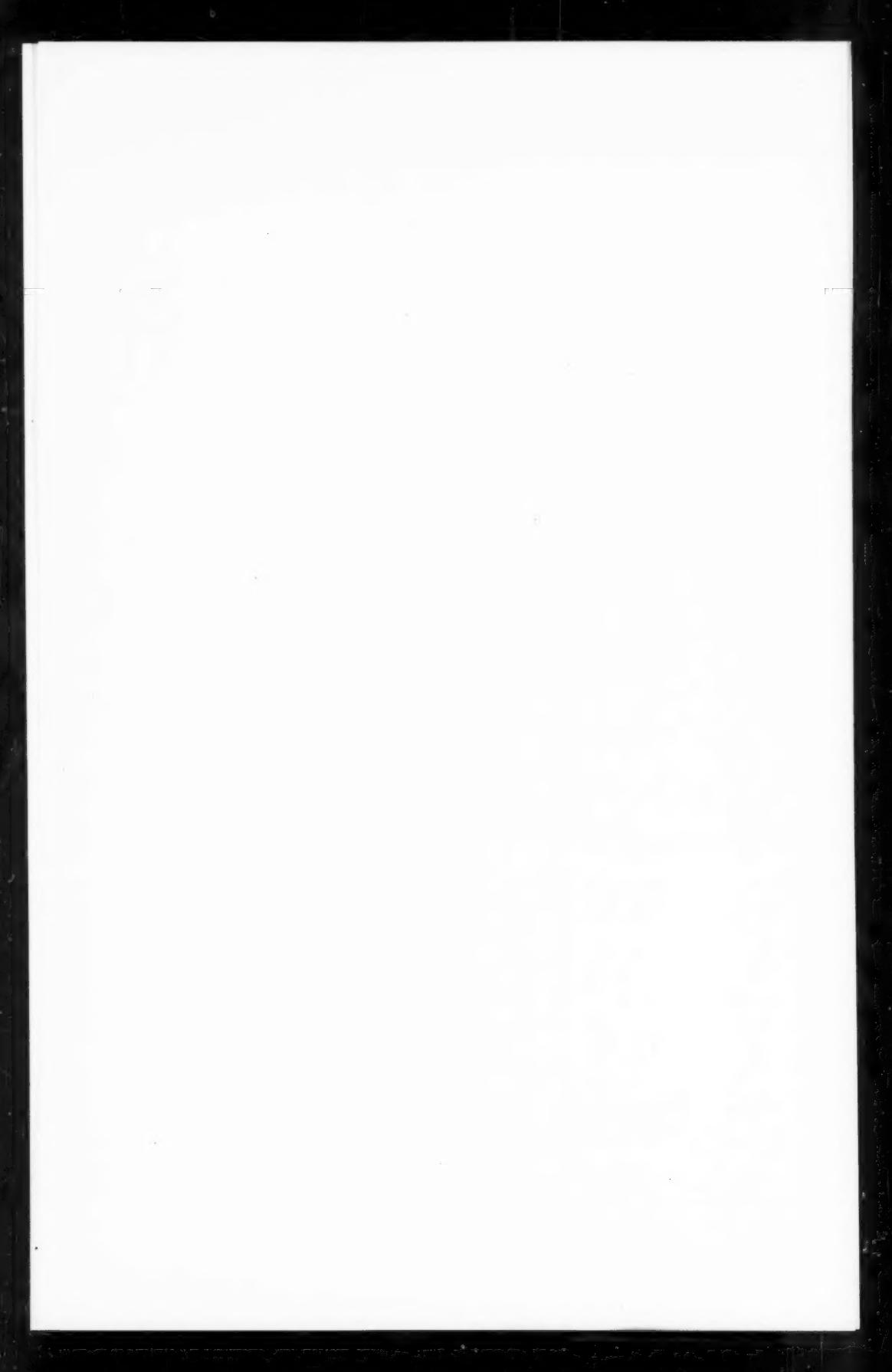
Tanguay, R. B. 442  
Taylor, Herbert B., 420  
Taylor, Richard Dee, 472  
Thompson, Robert B. (letter), 290  
Troughton, W. D., 139  
Troutman, Gerald L., 503  
Troxel, David B., 625  
Tsai, C. Y., 103  
Turner, N. A., 139  
Turner, Thomas R., 503

Van Horn, Diane L., 204  
Vazquez, Martha, 82  
Veiga, Secundino, 645  
Vondráčková, Anna, 411  
Vortel, Vladimír, 411

Wallace, Jack E., 152  
Walsh, Michael P., 282  
Way, Jacqueline, 483  
Wang, Li-Tu, 103  
Ward, F. A., 27  
Warwick, Warren J., 133  
Weiser, Orman L., 587  
Wenandy, June B., 289  
Wiener, A. S., 27  
Williams, George Z., 603  
Winters, R., 376  
Wolf, Paul, 362  
Wong, F. M., 562

Yarinsky, Allen, 490, 494

Zelman, Samuel, 427  
Zimmerman, R. A., 373  
Zuehlke, Volker, 363  
Zylak, Carl J., 330



# American Journal of Clinical Pathology

OFFICIAL PUBLICATION OF THE  
AMERICAN SOCIETY OF CLINICAL PATHOLOGISTS

## *Board of Editors*

LESTER ADELSON  
R. D. BAKER  
P. R. BEAMER  
G. R. BISKIND  
G. P. BLUNDELL  
W. M. CHRISTOPHERSON  
BRADLEY COPELAND  
REX COUCH  
C. G. CULBERTSON  
ISRAEL DAVIDSOHN  
L. W. DIGGS  
E. R. FISHER

S. E. GOULD  
E. B. HELWIG  
J. B. HENRY  
D. L. HINERMAN  
J. W. KERNOHAN  
RAFFAELE LATTES  
H. H. LEFFLER  
H. J. LINN  
J. R. McDONALD  
P. J. MELNICK  
E. E. MUIRHEAD  
C. A. OWEN, JR.  
E. R. POWSNER

J. W. REAGAN  
JOHN REBUCK  
S. BRANDT ROSE  
ROBERT SCHREK  
D. A. SENHAUSER  
JOHN SHIVELY  
D. E. SMITH  
KURT STERN  
G. G. STILWELL  
F. W. SUNDERMAN  
V. N. TOMPKINS  
L. A. WEED  
R. E. ZIPF

---

FRANK VELLIOS, *Editor-in-Chief*  
ISABELLA ROWLISON, *Assistant to the Editor*  
Indiana University Medical Center  
Indianapolis, Indiana 46207

Volume 46, Numbers 1-6

JULY-DECEMBER

Baltimore  
The Williams & Wilkins Company  
1966

COPYRIGHT ©, 1966 BY THE WILLIAMS & WILKINS COMPANY

## TABLE OF CONTENTS

JULY TO DECEMBER, 1966

### Number 1, July 1966

Contributions of Pathology to Problems of Human and Experimental Lung Cancer. WARD BURDICK	1
Award Address. W. A. D. ANDERSON	
The Serologic Specificity (Blood Factor) C of the A-B-O Groups. Theoretical Implications and Practical Applications. A. S. WIENER AND F. A. WARD	27
Transplacental Fetal-Maternal Hemorrhage. JOHN F. SULLIVAN AND E. R. JENNINGS	36
Studies on Infectious Mononucleosis. IV. Changes in the Granulocytic Series. EDWARD F. CANTOW AND JOHN E. KOSTINAS	43
Three-Hour Prothrombin Consumption Test in Siliconized Glass. Diagnostic Value in First-Phase coagulation Defects. CARLOS GOLDSTEIN, LIBERTO PECHET, AND BENJAMIN ALEXANDER	48
Effect of Medium on Anaerobic Variation in Sensitivity of Staphylococci to the Penicillins. CORNELIUS J. O'CONNELL AND MELVYN B. LEWIS	55
A Thin-Layer Chromatographic Screening Test for the Detection of Users of Morphine or Heroin. BERNARD DAVIDOW, NICOLI LI PETRI, BABINGTON QUAME, BERNARD SEARLE, EUGENE FASTLICH, AND JOSEPH SAVITZKY	58
Recorder Curve Integration for Quantitating Trace Metals in Serum by Atomic Absorption Spectroscopy. DENIS O. RODGERSON AND RAY E. HELFER	63
An Automated Procedure for the Determination of Sweat Electrolytes. JAMES F. ELAM AND RICHARD E. PALMER	65
An Automated System for the Fluorometric Determination of Serum Lactate Dehydrogenase. Its Adaptability to an Automated System for Simultaneous Determination of Both Serum Lactate Dehydrogenase and Serum Glutamic Oxaloacetic Transaminase. SELVIN PASSEN AND WILLIAM GENNARO	69
Correlation of Serum Enzymes and Morphologic Alterations of the Liver. With Special Reference to Serum Guanase and Ornithine Carbamyl Transferase. A. WENDELL MUSSER, CORPUS ORTIGOZA, MARTHA VAZQUEZ, AND JOSEPH RIDICK	82
A Method for the Continuous Analysis of Sulfobromophthalein in Laboratory Animals. N. P. ARCHER, E. C. PIERCE, AND R. C. ANDERSON	89
Intrapericardial Fat Pads and Anomalous Development of the Septum Transversum as a Cause of Pseudocardiomegaly. W. F. POMPUTIAS AND EDWIN R. FISHER	92
Luetic Aneurysms of the Aortic Valve, Sinus of Valsalva, and Aorta. DAVID SOHN AND SEYMOUR LEVINE	99
Systemic Chromoblastomycosis Due to <i>Hormodendrum dermatitidis</i> (Kano) Conant. Report of the First Case in Taiwan. C. Y. TSAI, Y. C. LU, LI-TU WANG, TENG LUNG HSU, AND JUEI-LOW SUNG	103
Squamous Papillomas of the Uterine Cervix. Review of the Literature and Report of a Giant Papillary Carcinoma. ENID F. GILBERT AND ANTONIO PALLADINO	115
<i>In Memoriam:</i>	
Stuart Allen Wallace, M.D. W. N. POWELL, M. H. GROSSMAN, AND C. J. LIND	122
Edward Carl Rosenow, M.D. JAMES ECKMAN	123
Books Received	125
Book Reviews	132
<i>Technical Section</i>	
A Fluorometric Micro Method for Serum Tocopherol. LELAND G. HANSEN AND WARREN J. WARRICK	133
Separation of Urinary Amino Acids by Thin-Layer High Voltage Electrophoresis and Chromatography. W. D. TROUGHTON, ROSEMARY ST. CLAIR BROWN, AND N. A. TURNER	139
A Rapid Micro-Technic for Hemoglobin Electrophoresis. JON B. OWENS, JR., A. PIDD MILLER, WILSON G. BROWN, AND JOSEPH A. STOOL	144
Reproducibility of Prothrombin Time Determinations Between Technologists. Comparison of the Fibrometer and Tilt-Tube Methods. ROY N. BARNETT AND CARMINE L. PINTO	148

Rapid Vapor Phase Method for Determining Ethanol in Blood and Urine by Gas Chromatography. JACK E. WALLACE AND ELMER V. DAHL	152
Malarial Parasites. Concentration by Saponin Hemolysis. JOSEPH H. KEFFER	155
Histoplasmosis in Peripheral Blood. MILDRED G. JOBE AND JOHN A. KOEPKE	158
A Table-Top Cold Plate for Chilling Blocks in the Paraffin Embedding Process. FREIDA CARSON, W. B. KINGSLEY, AND GEORGE J. RACE	160
News and Notices	161
Laboratory Suggestion:	
A Simple Staining Unit for Coverslips. FRANCES BOUCHARD	162

**Number 2, August 1966**

Quantitative Analysis of 4-Hydroxy-3-Methoxymandelic Acid by Direct Photometric Scanning of Urinary Extracts Separated by Thin-Layer Chromatography. ROBERT F. MCGREGOR, MYRNA KHAN, DAVID MARRACK, AND MARGARET P. SULLIVAN	163
The Measurement of Conjugated Catecholamines in Human Urine. ALICE E. FRUEHAN AND GEORGE F. LEE	172
Creatine Phosphokinase Determination by the Fluorescent Ninhydrin Reaction. REX B. CONN, JR., AND VICENTE ANIDO	177
Coulometric Determination of Thallium in Blood and Urine. GARY D. CHRISTIAN AND WILLIAM C. PURDY	185
A Comparison of Currently Popular Thyroid Function Tests. RAYMOND B. SQUIRES AND W. HENRY LANGHORNE	189
A Comparative Study of Laboratory Performance Using Frozen Serum Unknowns. ROLAND E. BERRY	193
The Measurement of Amniotic Fluid Bilirubin by the Method of Jendrassik and Grof. Its Correlation with Spectrophotometric Analysis. S. RAYMOND GAMBINO AND VINCENT J. FREDA	198
The Mechanism of Thrombocytopenic Bleeding. DIANE L. VAN HORN AND SHIRLEY A. JOHNSON	204
Acute Promyelocytic Leukemia. A Report of 3 Autopsied Cases. GERALD R. PITTMAN, DONALD A. SENHAUSER, AND JOHN F. LOWNEY	214
Shigellemia Without Shigella Diarrhea. Report of a Case. C. D. GRABER, DAVID BROWNING, AND JOYCE S. DAVIS	221
<i>Shigella alkaescens</i> as a Cause of Hemorrhagic Cystitis. A Case Report. THOMAS J. HEILMAN AND GEORGE BERG	225
Meningoencephalitis Due to Hartmannella (Acanthamoeba). DOROTHY PATRAS AND JOHN J. ANDUJAR	226
Meningitis Due to <i>Mima polymorpha</i> . STANLEY BURROWS AND MARY J. KING	234
Central Pontine Myelinolysis and Cirrhosis of the Liver. A Report of 4 Cases. L. F. SHURTLEFF, E. T. AJAX, E. ENGLERT, JR., AND A. N. D'AGOSTINO	239
Medulloblastoma with Extracranial Metastasis Through a Ventriculovenous Shunt. Report of a Case and Review of the Literature. L. C. MAKEEVER AND JOHN D. KING	245
A Rapid Polychrome Stain for Epoxy-Embedded Tissue. J. H. MARTIN, J. A. LYNN, AND W. M. NICKEY	250
A Simple Rapid Method for Staining Epoxy-Embedded Specimens for Light Microscopy with the Polychromate Stain Paragon-1301. BEN O. SPURLOCK, MARGARET S. SKINNER, AND ANTHONY A. KATTINE	252
President's Award for Distinguished Federal Civilian Service	259
<i>In Memoriam:</i>	
Arnold F. Strauss, M.D. ROBERT J. FAULCONER	260
Harold A. Grimm, M.D. COYE C. MASON	262

*Technical Section*

Automated Submicrochemistries. A System of Rapid Submicrochemical Analysis for the Measurement of Sodium, Potassium, Chloride, Carbon Dioxide, Sugar Urea Nitrogen, Total and Direct-Reacting Bilirubin, and Total Protein. C. CHARLTON MABRY, ROBERT E. GEVEDON, IRENE E. ROECKEL, AND NATHAN GOCHMAN	265
Determination of Plasma Pyridoxal Phosphate with Wheat Germ Glutamic-Aspartic Apotransaminase. MICHAEL P. WALSH	282

## Monitoring the Quality of Blood Cell Counts with Replicate Determinations on Routine Samples.

FRANK R. DUTRA ..... 286

## The Hollow Pneumatic Ram as a Serum Separator. A Time-Saving Method. ROBERT R. BELLIVEAU,

JOHN W. GRAYSON, JR., AND JUNE B. WENANDY ..... 289

## Letters to the Editor:

ROBERT B. THOMPSON AND R. W. BRANGLE ..... 290

## Book Reviews ..... 294

## Number 3, September 1966

## Glomerulonephritis. Observations by Light and Electron Microscopy. GENGO OSAWA, JOSEPH BERES, AND PAUL KIMMELSTIEL ..... 295

## Hartmannella (Acanthamoeba). Experimental Chronic, Granulomatous Brain Infections Produced by New Isolates of Low Virulence. C. G. CULBERTSON, P. W. ENSMINGER, AND W. M. OVERTON ..... 305

Carcinoma *in Situ* of the Lung of Peripheral (Bronchiolar) Origin. S. W. BERKHEISER ..... 315

## Pulmonary Blastoma, a Form of Carcinosarcoma. Report of a Case of 24 Years' Duration without Treatment. DONALD E. BAUERMEISTER, ELMER R. JENNINGS, ARTHUR H. BELAND, AND HERBERT A. JUDSON ..... 322

## Pathologic Examination of Specimens Containing Nonpalpable Breast Cancers Discovered by Radiography. ROY B. PATTON, ANDREW E. POZNANSKI, AND CARL J. ZYLAK ..... 330

## Histopathology of Lymph Nodes after Lymphangiography. RICHARD RAVEL ..... 335

## Effect of Exercise on Red Blood Cell in March Hemoglobinuria. HENRY JOSHUA AND ANDRE DE VRIES ..... 341

## The Tryptophan Load and Pyridoxine Deficiency. WILLIAM W. COON ..... 345

## The Quantitation of Ethyl Alcohol in Vitreous Humor and Blood by Gas Chromatography. WILLIAM Q. STURMEY AND RICHARD J. COUMBIS ..... 349

## The Determination of Estrogen and Progesterone Metabolites in Urine in Pregnancy by Gas Chromatography. ARTHUR L. LARSEN AND ARDEN W. ENGSTROM ..... 352

## The Production of a State of Active Immunity to Isologous and Autologous Serum Proteins. MELVYN ROSENBLATT, CHIYO CHIBA, TETSUZA MOTOYOSHI, ALAN MORRIS, VOLKER ZUEHLKE, PAUL WOLF, AND RICHARD J. BING ..... 362

## A Case of Sudden Death from Streptococcal Septicemia. R. A. ZIMMERMAN, G. W. SCIPLE, AND L. A. KIDDER ..... 373

Report of *Ad Hoc* Committee on Acid-Base Methodology. S. R. GAMBINO, P. ASTRUP, R. G. BATES, E. J. M. CAMPBELL, F. P. CHINARD, C. C. NAHAS, O. SIGGAARD-ANDERSEN, AND R. WINTERS ..... 376

## Letter to the Editor:

## Small "Angiomatous" Tumors of the Myometrium. GISELA DALLENBACH-HELLWEG ..... 382

*In Memoriam:*

Frank A. Bartkus, M.D. ROBERT Y. KATASE ..... 383

## Book Reviews ..... 384

## Technical Section

## Determination of Serum-Hemoglobin Binding Capacity and Haptoglobin-Type by Acrylamide Gel Electrophoresis. THOMAS G. FERRIS, ROBERT E. EASTERLING, KENNETH J. NELSON, AND RICHARD E. BUDD ..... 385

Modifications in the *Lactobacillus casei* Assay of Serum Folate Activity. MEHRAN GOULIAN AND WILLIAM S. BECK ..... 390

## Microcapillary Technic for Red Blood Cell Osmotic Fragility. JAMES B. MCCORMICK ..... 392

## Capillary Screening Test for Infectious Mononucleosis. RAYMOND C. BARTLETT AND MARIE T. CASTAGNO ..... 395

## Normal Values for Serum Glutamic Oxalacetic Transaminase and Lactic Dehydrogenase Activities. JOSEPH S. ANNINO ..... 397

## A Method for Separation and Quantitation of LDH Isoenzymes on Cellulose Acetate. B. MARCILLE LANCE ..... 401

## An Ultramicro Serum L-Lactate Determination Not Requiring Removal of Protein. ROMAN B. RUTKOWSKI AND LARISSA DEBAARE ..... 405

Comparison of Bile and Trypticase Soy Broth for Isolation of *Salmonella* from Blood. DONALD KAYE, MICHELLE PALMIERI, LUC EYCKMANS, HEONIR RICHA, AND EDWARD W. HOOK ..... 408

## Number 4, October 1966

Herpes Simplex Involvement of the Lower Respiratory Tract. VLADIMÍR HEROUT, VLADIMÍR VOR-	411
TEL, AND ANNA VONDRAČKOVÁ.....	
Melanomas of the Vagina. HENRY J. NORRIS AND HERBERT B. TAYLOR.....	420
Giant-Cell Carcinoma of the Lungs. An Analysis of 12 Cases. RAMON A. GUILLAN AND SAMUEL	
ZELMAN.....	427
The Use of Immunofluorescence for Identification of Yeastlike Fungi in Human Infections. HAMID	
R. REZAI AND SOL HABERMAN.....	433
Observations on the Heat-Modified Rheumatoid Arthritis Test. A. C. NOTO AND R. N. BARNETT.....	440
Cystinuria Associated with Mongolism and Identification of an Abnormal Pyrrolidine Compound	
in Urine. R. B. TANGUAY AND J. GALINDO.....	442
Effect of Sample Volume and Hematocrit on the One-Stage Prothrombin Time with Oxalated	
Plasma. JULIAN I. JOSEPH, RONALD MAENZA, HAROLD KAPLAN, AND IVY FONSECA.....	449
A Whole Blood Dilution Test for Coagulability. DAVID GREEN AND LOUIS A. KAZAL.....	455
A Solid State Whole Blood Coagulation Time Device. JOSEPH BEEMAN.....	463
Modification of the Brown and Brenn Gram Stain for the Differential Staining of Gram-Positive	
and Gram-Negative Bacteria in Tissue Sections. RICHARD DEE TAYLOR.....	472
Letters to the Editor:	
FRANK R. DUTRA AND FARREL R. ROBINSON.....	475
<i>In Memoriam:</i>	
Benjamin E. Konwaler, M.D. I. M. REINGOLD.....	477
Donald L. Creed, M.D. CHARLES F. CARROLL, JR.....	478

## Technical Section

Technologist-Pathologist Relationships and Role of American Society of Clinical Pathologists.	
WILLIAM O. RUSSELL.....	479
Quantitative Determination of A <sub>2</sub> Hemoglobin by Filter Paper Electrophoresis. MELVIN H. BLACK,	
HUGH MILLER, JR., AND JACQUELINE WAN.....	483
The Use of Filter Paper PKU Test Specimen Cards in the Automated Determination of Blood	
Phenylalanine Concentration. PAULA TODD CLARK AND JOHN D. RICE, JR.....	486
News and Notices.....	489
Atypical Nuclei of <i>Endolimax nana</i> in Purged Stool Specimens. ALLEN YARINSKY AND ROBERT B.	
BURROWS.....	490
Increase in Number of <i>Endolimax nana</i> Trophozoites with Typical Nuclei in Serial Samples of	
Purged Stool Specimens. ALLEN YARINSKY AND ROBERT B. BURROWS.....	494
Hartmannella (Acanthamoeba). Experiments in Preservation and Detection of Trophozoites and	
Amebic Cysts in Infected Tissue. P. W. ENSMINGER AND C. G. CULBERTSON.....	496
A New Water-Soluble Embedding Compound. FIDELIO A. JIMENEZ.....	500
Book Review.....	502
A Rapid Fluorochromatic Tissue Stain for Frozen Section Diagnosis. WILLIAM J. JAFFURS, THOMAS	
R. TURNER, AND GERALD L. TROUTMAN.....	503
Laboratory Suggestion:	
Guthrie Test for Phenylketonuria. V. C. CONLAY.....	504

## Number 5, November 1966

Who Speaks for Clinical Pathology? JOHN G. BATSAKIS.....	505
The Use of Lectins for the Detection of Leukocyte Antigens. ALI A. HOSSAINI.....	507
Deep-Seated Fungal Infections Currently seen in the Histopathologic Service of a Medical School	
Laboratory in Britain. WILLIAM ST. CLAIR SYMMERS.....	514
Observations of Phagocytized Red Cells Containing Heinz Bodies. A Light and Electron Micro-	
scopic Study. BERTRAM SCHNITZER AND EDWARD B. SMITH.....	538
Plasmacytic Reticulum Cell Sarcoma. Case Report with Electron Microscopic Studies. HIROMITSU	
OKAÑA, HENRY A. AZAR, AND ELLIOTT F. OSSERMAN.....	546
Multiple Polypoid Thrombi of Right Atrium. Report of a Case. PAUL A. GOODMAN, GERALD H.	
MANDELL AND STANLEY H. LEVY.....	556
<i>Corynebacterium pseudotuberculosis</i> . First Case of Human Infection. J. F. LOPEZ, F. M. WONG, AND	
J. QUESADA.....	562

Use of Polarized Light Produced by Binocular Microscopes. DEAN LUSTED.....	568
News and Notices.....	572

*Technical Section*

Incidence of Irregular Antibodies in a General Hospital. RICHARD M. IAMMARINO.....	573
A One-Step Method for Counting Leukocytes and Platelets. PETER A. MIESCHER AND HORACE W. GERARDE.....	576
A New Micro Saccharogenic Method for Serum Amylase Determination. RONALD L. SEARCY, SHINI CHIRO HAYASHI, AND J. EDWARD BERK.....	582
Fluorochrome Staining of Mycobacteria. ORMAN L. WEISER, ERMA F. SPROAT, JAMES D. HAKES, AND WARREN C. MORSE.....	587
Resistance of the Klebsiella-Aerobacter-Serratia Division to Cephalothin and Ampicillin. Importance of Identification and Nomenclature. MARIE L. KOCH AND HAROLD D. ROSE.....	589
Laboratory Suggestions:	
A Modification of the Bohou Dye Method for Serum Magnesium. JOHN J. CONBOY, MEL A. DAVIS, AND JAMES D. GOTTE.....	594
Simplified Method of Staining Cytology Smears by the Papanicolaou Method. PATRICK V. BAILEY.....	596
A Rapid Method of Repairing Tissue. RALPH FERGUSON.....	597
News and Notices.....	598
Letter to the Editor:	
EDWARD R. POWSNER.....	598

**Number 6, December 1966**

Vanilmandelic Acid Screening Test for Pheochromocytoma and Neuroblastoma. WILSON G. BROWN, JON B. OWENS, JR., ANITA W. BERSON, AND SARAH KAY HENRY.....	599
The Millimolar Extinction Coefficient of Cyanmethemoglobin from Direct Measurements of Hemoglobin Iron by X-Ray Emission Spectrography. DOUGLAS A. MORNINGSTAR, GEORGE Z. WILLIAMS, AND PIRJO SUUTARINEN.....	603
The Evaluation of Ethanol Measurements with Alcohol Dehydrogenase. DALORES STILES, JOHN G. BATSAKIS, BEVERLY KREMER, AND RUSSELL O. BRIERE.....	608
Further Evidence for a Simpler View of the Coagulation of Blood. FRANK D. MANN.....	612
A Weak Variant of Blood Group A Similar to $A_x$ in a Japanese Family. NOBUYOSHI MATSUDA AND HOWARD B. HAMILTON.....	616
Infectious Mononucleosis Complicated by Hemolytic Anemia due to Anti-i. DAVID B. TROXEL, FILOMENA INNELLA, AND RICHARD J. COHEN.....	625
The Significance of Klebsiella Enteritis. A Study of Seven Cases. CHARLES M. KARPAS AND ISABEL BOMAN.....	632
Appendicitis Follicularis Suppurativa. ARKADI M. RYWLIN, HERSCHEL W. GORDON, AND GUNTER SCHWARZBART.....	641
Sparganosis in a Chicago Resident Originally from Arkansas. Report of a Case. RUSSELL MICHAEL McQUAY, SECUNDINO VEIGA, AND WILLIAM A. FRUMOVITZ.....	645
Pulmonary Surfactant in the Immature Infant. JOHN R. ESTERLY.....	649
News and Notices.....	655
Letters to the Editor:	
The Vacuum Tube in Acid-Base and Blood Gas Studies. S. RAYMOND GAMBINO.....	656
Dr. Jung's Reply. RALPH C. JUNG.....	656
<i>In Memoriam:</i>	
Lawrence Buell Parsons, M.D. JOHN W. CALLISTER.....	657
Acknowledgment.....	658
Books Received.....	659
Book Reviews.....	663

*Technical Section*

Revised Calculations for Total Serum Proteins by Refractometry and for Total Base (and Sodium) by Conductivity. F. WILLIAM SUNDERMAN.....	679
---	-----

An Evaluation of the Variance of Leukocyte Counts as Performed with the Hemocytometer, Coulter, and Fisher Instruments. T. E. GAGON, J. W. ATHENS, D. R. BOGGS, AND G. E. CARTWRIGHT.	684
Thin Gel Electrophoresis in Agarose. FRANKLIN R. ELEVITCH, SAMUEL B. ARONSON, THOMAS V. FEICHTMEIR, AND MELINDA L. ENTERLINE.	692
Evaluation of a Rapid Nitrite Screening Test for Bacteriuria. DOROTHY BRANSON.	698
Usefulness of $\beta$ -Galactosidase Demonstration in Diagnostic Bacteriology. JESSE H. MARYMONT, JR., URMILLA AMANNA, AND B. H. LLOYD.	702
Safe and Rapid Method for Obtaining Large Quantities of Blood from the Rabbit. BETTY J. SANDERS.	704
Index of Subjects, Volume 46, July-December, 1966.	707
Index of Authors, Volume 46, July-December, 1966.	713
Table of Contents, Volume 46, July-December, 1966.	iii

